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THE AUTOMOBILE MAGAZINE

EDITED BY

ANGUS SINCLAIR

174 BROADWAY, NEW YORK, U. S. A.

Volume IV Number 8

NOTWITHSTANDING

The long distance, and above all the great difficulties of bad mountain roads in Switzerland and Austria

THE LIGHT

DARRACQ

Vehicles have figured brilliantly in the

Paris-Vienna Race

Taking **FIRST PLACES** and establishing records as they usually do:

2—**EDMOND**	- - - -	16 h., 12 m., 30 s.
3—**BARAS**	- - - -	17 h., 17 m., 52 s.
5—**HEMERY**	- - - -	17 h., 28 m., 28⅗ s.
6—**MARCELIN**	- - - -	17 h., 45 m., 18 s.
9—**COLLIN**	- - - -	19 h., 19 m., 35⅗ s.

ALSO IN THE VOITURETTE CLASS

1st—**GUILLAUME**	- - -	18 h., 54 m., 50 s.

BUT

Most noteworthy is the fact that in the General Classification the Light

DARRACQ

Vehicles are 3d and 5th. beating **20 Heavy Racing Machines,** proving not only that the DARRACQS are the fastest, but are also superior to the **MASTODON RACERS** in Endurance, Reliability and Regularity.

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THE AUTOMOBILE MAGAZINE

VOL. IV AUGUST, 1902 No. 8

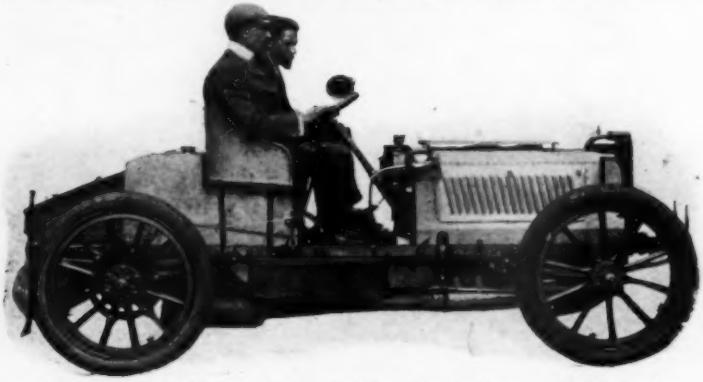
From Paris to Vienna

ONE scarcely knows which to admire the most, the ingenuity of man in his ability to construct a vehicle capable of sustaining the terrific strains of such a journey as the Paris to Vienna race, or the indomitable determination, skill and grit necessary to pilot this wonderful mass of machinery to a triumphant finish. Both are brilliant examples of what men can do under the stimulus of commercial and sporting emulation.

For miles and miles in this great contest men raced automobiles at a speed which few if any Continental railroad trains are run at over roads which were far from being of the sandpapered variety which confiding Americans are wont to believe are universal abroad. In passing through portions of the Austrian Alps the course of the race was along a road, some six thousand feet above the sea level, which was literally hung on the brinks of precipices. Ruts, loose stones and freshly fallen snow all combined to make the passage of such a course at racing speed something which few who successfully accomplished it will ever care to again undertake.

As usual the management of the great race left nothing to be desired, the Automobile Club of France being too experienced and too energetic an organization to permit of anything conducted under its auspices being otherwise than perfect. The race was virtually two events in one, the Gordon Bennett Cup and the Paris-Vienna contest. The first named ended at Innsbruck, 360 miles from Paris and for the first time was won by a foreigner, S. F. Edge, in a British built, 40 h. p., Napier, landing the event in 10 hrs. 41 mins. beating out all of the famous racers of France, which is equivalent to saying of the world.

The other contest ending in Vienna was one which required considerable argument and discussion to announce the winner of,



The Winning Napier with S. F. Edge, the Driver, and Mr. Napier, the Constructor of the Vehicle

but Marcel Renault, in a 16 h. p. vehicle built by himself and weighing 1,400 pounds traveling the 695 miles in 26 hrs., 47 secs. was finally given the honor. The triumph of this comparatively light carriage over the big vehicles was in its way almost as much of a surprise as the lifting of the Bennett cup by an Englishman was.

The finish of the race occurring on Sunday brought tens of thousands of Vienna's sport loving citizens to the famous trotting track near the Rotunda in the Prater where the contest was scheduled to finish between the hours of 12 and 2. Hardly had the hands of the clock reached 2 when afar down the road a cloud of rapidly approaching dust was seen and the excitement of the vast assemblage became intense, since none knew who the rapidly approaching racer might be. Like a cyclone in the desert swept by the successful racer and when the dust had temporarily cleared away it was

seen that it was Renault, a competitor almost unknown to most of those present, though not without well deserved fame in his own country.

At once the air was filled with cheers and Vienna's most famous band, which was stationed at the finish, broke forth in the Marseillaise in the singing of which thousands of spectators joined. Not only was Renault first of all the contestants to finish, but he was

Renault at the Finish

also accorded the honor of having covered the course in less time than any other vehicle, not alone of his class, but of all classes.

The second arrival was Count Zborowski, well known in America as a former resident of Morristown, N. J. The Count's vehicle was a 40 h. p. Mercedes. This total elapsed time should have ranked second to that of Renault had he not been penalized 40 minutes for violating some rule governing that portion of the race wherein Switzerland was traversed.

In quick order, third and fourth, came Maurice and Henry Farman, both driving 70 h. p. Panhards. Baras, on an alcohol-driven 24 h. p. Darracq, arrived fifth, followed by Edmond and Hemery, each on 24 h. p. Darracqs—many were amazed at the prominence of the light vehicles. Then came Baron de Forest, his 40 h. p. Mercedes being ingloriously towed, his supply of gasolene having given out at the last moment—a decidedly unfortunate occurrence, since otherwise he might easily have won the race itself.

Considerable feeling was shown at the giving of the race to Renault, he having flagrantly broken the rules of the contest by failing to be checked at Florisdorf, a suburb of Vienna, and again by not having slowed down to the legal rate of speed while traversing the streets of Vienna, as all contestants were strictly enjoined to do. Many thought and openly expressed the belief, that had the offender been of any other nationality than a Frenchman the leniency shown him might not have been duplicated. As proof of this they point to the fact that Zborowski's penalty of 40 minutes was strictly enforced and his offense was in no wise different from that of which Renault was said to have been guilty.

The official results issued gives the winners and the times as follows:—(1) Marcel Renault, 26 hrs. 10 mins.; (2) Henry Farman, 26 hrs. 34 mins.; (3) Edmond, 26 hrs. 46 mins.; (4) Maurice Farman, 26 hrs. 51 mins.; (5) Zborowski, 26 hrs. 58 mins.; (6) Teste, 27 hrs. 29 mins.; (7) Baras, 27 hrs. 41 mins.; (8) Hemery, 27 hrs. 56 mins.; (9) Marcellin, 28 hrs. 13 mins.; (10) P. de Crawhez, 28 hrs. 33 mins.

These are the gross times, inclusive of the periods occupied in traveling over control stretches wherein no racing was allowed. There may be good reasons for including these, but they are not apparent on the surface. It would surely have been more useful to have given the actual net times, that is, the number of hours and minutes in which racing was actually engaged in. As for the full official results, it is said that they will not be computed for months long after the public has forgotten all about the affair. There is apparently as much red tape surrounding a European road race as there is about the tabulation of a census report, which is much to be regretted, since the public prefers to have its official notification of who won, why and how to follow closely after the event itself.

It is a very easy matter to follow automobile advice that travels in the direction you are going.

Eve Never Did

"NO, sah!" said Uncle Simeon as he gazed over the slowly wagging ears of the animated boneyard which in a mulish way supplied the power to the horseless vehicle in which he sat; "I doan like dese yere automobilly clos' no how. I doan like to see folkses wearin' things like dese. It's agin' sense an' reason. Yes, sah! Dey didn't nebber wear sich tings in de good ole Bible times, sah! No, sah! Yo' won't find goggles spoke of oncet. Look at Ebe in de gyarden of Eden. Did she go prancin' 'round in one ob dem automobilly coats what fits like it was a meal sack? No, sah! Ole mam Ebe she done had better sense'n dat. I ain't got no patience wif dese yere wimmins ob nowadays, I hain't. Why cayen't dey foller in de footsteps ob de Bible, I ask yo'? Wy doan' dey foller ole mam Ebe? Dat's what I wan' ter know. Yeh doan' nebber hear ob her wearin' sich nonsense t'ings as an automobilly coat!"

The gentleman in the dark to the one in the light: "'Who am I?' Who do you tink? Can't yer tell be me cap, me lamp and me blinders dat I'm one of dose automobil fellers?"

Sad Case of Chris. Crossye

WHEN the members of the Africo-American Auto Club had removed their coats, loosened their "galluses" and otherwise made themselves comfortable, President Missfire Sparker called the meeting to order by hammering the table in front of him with a monkey wrench.

Routine business having been disposed of, the case of Brother Chris. Crossye was brought before the meeting for final action. Brother Crossye had been one of the first converts to automobiling, and the ragtime manner in which he manipulated a runabout had elicited unbounded admiration from the foremost Africo automobilists.

In one week he was arrested five times. During another seven days he was licked by five different horse owners. Complaints came in so fast that he was finally suspended pending an investigation. He was now present and ready to be investigated, and it was not long before a curious condition of affairs developed.

Brother Crossye was not only color blind, but his vision was way off in other directions. What to the eyes of any other person was a large moving van with two horses hitched to it appeared to him to be only a small boy with a pug nose, drawing a cart along the street. That accounted for his bumping into so many vehicles.

The curbstones along the streets appeared to him like so many chalk lines, and unless a pedestrian had red hair or wore a blue necktie he appeared like a wavering shadow to Brother Crossye. Lamp posts he could not distinguish at all, and another automobilist was often taken for a poodle dog trotting along. If an Italian had a push cart loaded with fruit on a corner Brother Crossye took him for a bay window on the second story and rode right into him at full speed, and all the street cars appeared to him to be lame men crossing the road to get a glass of beer. When these facts came out it was the unanimous opinion of the members that he must tender his resignation, which was reluctantly done and promptly accepted.

The usual argument as to the superiority of one automobile over another was then begun and continued until the janitor turned off the gas in the basement.

There's a fortune in store for the man who will invent a motorless automobile.

THE FAIR CHAUFFEUSE

A STORY FOUNDED ON FACTS

BY CLARENCE JAMES

BE it known that I am a married man and the owner of an automobile, I also am the owner of various other useful as well as unuseful articles, but this story has to do only with the two just mentioned. I have driven an automobile for about two years, and my wife has driven me for about—but that is a family secret.

In an amateur way I am quite a clever automobilist, that is, I know how to run a motor vehicle, and have more or less intimate acquaintance with spark-plugs, trembler springs, gears, clutches and the like. These facts have nothing at all to do with the story, in their telling I am just trying to square myself, so that you will know it was not my fault or my carelessness which was responsible for what follows. I am merely following the example of the older married men, whose motto is: "Blame everything bad on your wife."

My wife is a small but determined little body; what she lacks in size, she more than makes up for in spunk.

My new gasolene car is one of those huge, two cylindered, twenty horse powered affairs such as you see advertised every day. I won't tell the make, as the manufacturers might feel discouraged, although what happened was not the vehicle's fault any more than it was mine, remember that.

Now that I have described the principal characters, I will get down to the story.

The eventful day began badly enough; it was close and sultry, one of those days when solid discomfort seems to have everything its own way.

Toward evening a breeze sprang up, and life seemed once more worth living.

After dinner I persuaded my wife to take a ride with me. She had never been in a gasolene motored carriage before (I have only

had this explosive affair a month; prior to buying it I had always used an electric), so my wife, who had just returned from a two months' sojourn with her mother, had never been in my new treasure.

I went back to the stable, got the new vehicle out, ran it up to the door and stopped.

My wife after a little coaxing got in and I made an effort to start the brute (my carriage has a crank at the side; in starting you open the compression tap, give the handle four or five full round turns, and it will start the motor the first time—so the agents and the instruction books say). Well I did my part all right, but the motor didn't start. Just about the time I was thinking naughty things, my dear, little, innocent wife leaned over and said: "John, dear, are you raking out the ashes?"

This drove all my bad humor away, and I tried starting the motor again with better success.

After I once got it working it ran finely. We had been out about an hour, when we came to the boulevard and my wife asked if I would teach her how to run the new conveyance. Of course it was up to me to do what she asked me.

I first explained the use of the different levers and steering apparatus, then I told her she would have to use her feet as well as her hands in operating the brake and clutch. She asked what the clutch was for and I told her. She wanted to know what the brake was for, and I said: "To stop the machine, of course." She wanted me to show her then how it worked, but I didn't see any use in doing so, since any fool can put on a brake. But my wife was not to be balked in that way, she merely stamped her foot and almost screamed: "Stop it!"

We were going at a fair speed and her feet hardly touched the floor; you can imagine the commotion when I threw out the clutch and applied the brake so hard that it skidded the wheels. The next I saw of my better half, she was speeding over the bonnet in front, at a twenty mile clip.

Luckily, I was able to catch her before she got all the way out of the vehicle.

Nothing daunted, she climbed back into the seat; asked for a few more instructions and then said: "I think I can run it now."

I changed seats with her and we started, very slowly at first. My better half did not seem to care much for the kind of steering the makers had equipped the vehicle with, she said "It was so

wiggly." It certainly must have been something of the kind because we were soon making the loviest zig-zags you ever saw. There was a small pond on one side of the road, which pond my wife seemed determined to run into. I had to reason with her and tell her that I already had one bath and didn't need another just at that time, beside, I argued, it was bad form to go in bathing with an automobile; we missed the pond in some way.

The next thing we came to was a long hill; we were about half way up this when my dear little wife threw out the clutch, let go the steering wheel, put her hands up to her hair and said: "Oh! John my hair is coming down." She had forgot to put on the brake, and before I thoroughly realized what had happened, we had backed down the hill about twenty feet, the speed gradually increasing. I called to her to put on the brake, but she couldn't do anything but scream. At last I managed to get my foot on the brake and stopped the Bellamy procession we were indulging in. We were both rather glad I had done this. But my wife was game, so we started up that hill again. As there were no toilet matters needing attention we surmounted it all right.

The next experience we had was on a long stretch of road, slightly down hill, an ideal spot for speeding, at least so my wife thought. She had now been running the vehicle for some time and had in consequence gained considerable confidence. She gradually increased the speed until we were going at a good thirty mile an hour clip. I asked her if she didn't think we had better slow down a bit; she only shook her head, apparently having a violent attack of racing fever, so all I could do was to hold on and pray for a non-funeral finish.

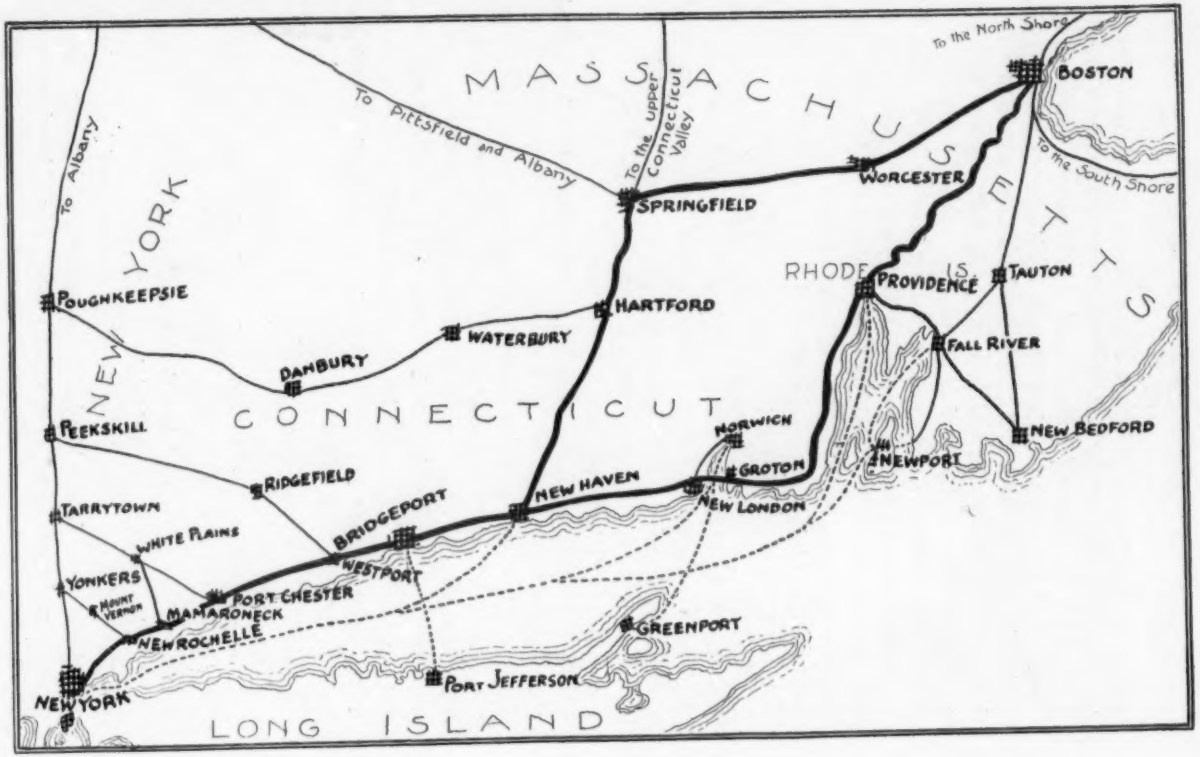
The road had just been sprinkled, and as we were approaching a sharp curve, I advised her to slow down, but as she didn't seem to hear me, I reached over and released the clutch; it was too late.

We had struck the corner. The rear wheels skidded. The flying carriage was aimed directly for a telegraph pole.

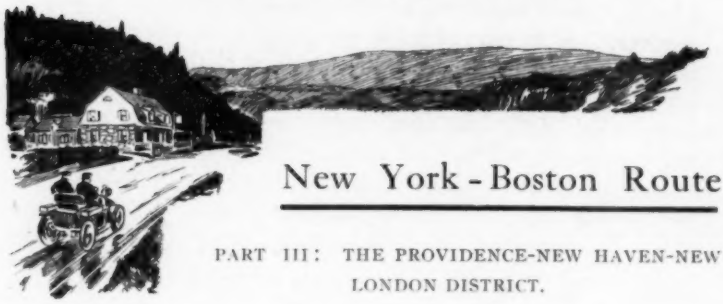
Crash — Bang — Bang!!!!!!

From this on, everything, so far as any personal knowledge of mine is concerned, is a blank. I remember nothing more until I came to, and peered out from under a multitude of bandages at my wife bending over me.

She in some miraculous way had escaped. The vehicle and I were the only victims.


To Albany
To Pittsfield and Albany
To the upper Connecticut Valley
To the North Shore
To the South Shore
MASSACHUSETTS
NEW YORK
CONNECTICUT
RHODE IS.
BOSTON
WORCESTER
SPRINGFIELD
PROVIDENCE
TAUTON
FALL RIVER
NEW BEDFORD
NEWPORT
HARTFORD
WATERBURY
DANBURY
POUGHKEEPSIE
PEEKSKILL
RIDGEFIELD
TARRYTOWN
WHITE PLAINS
YONKERS
MOUNT VERNON
PORT CHESTER
MAMARONECK
NEW ROCHELLE
NEW YORK
BRIDGEPORT
WESTPORT
NEW HAVEN
HORWICH
GROTON
NEW LONDON
GREENPORT
PORT JEFFERSON
LONG ISLAND

Touring Department



New York - Boston Route

PART III: THE PROVIDENCE-NEW HAVEN-NEW LONDON DISTRICT.

THE automobile touring routes from (1) New York to New Haven, and from (2) New Haven to Boston via Springfield, were outlined and illustrated in the June and July numbers of the AUTOMOBILE MAGAZINE. Coming now to the final and connecting portion, the "Shore Line" between New Haven and Boston, it appears the better way to continue the former series back to the starting point rather than, as it were, to begin over again and work out practically another route between the two cities. The groundwork of an important circular tour 508 miles, more or less, from start to finish is thus provided for anyone who wishes to make it—New York, New Haven, Hartford, Springfield, Worcester, Boston, Providence, New London, New Haven, New York and vice versa.

In this decision, too, another possibly-useful end is considered. Of the 168 miles from Boston to New Haven by the shore line, only the first 45 miles to Providence are uniformly good riding. Most of the way from Providence to New Haven, the roads are softer and ill-kept in comparison. It is not what a stranger would expect, but it is what he finds. However, one is here within a comparatively short distance of New York, and in case of accident or other necessity he may ship his vehicle back from any one of a number of Sound ports, losing only a stretch of coast-line very similar to the New York-New Haven portion. The superb run from Boston to Providence, as well as the fine routes up the Connecticut River Valley and across the State of Massachusetts would be already covered.

It is not intended in any way to discourage the making of the Providence-New Haven trip, which is a thoroughly practicable one with any type of staunch touring vehicle. On the contrary, a

section so near and so important a link to the summer resort country between Narragansett Pier and Cape Cod (including the entire Rhode Island coast), as well as to Boston and beyond, should be better known and more used by automobilists than it is to-day. However, it is the part of wisdom to look upon both sides; and he who credits this district with anything better than the average of country roads favors his subject. Especially in Rhode Island, the route itself is difficult at times to follow—the idea of a thorough road system is entirely lacking; and both here and in Eastern Connecticut, large stones and other obstructions are common in the center of the highways. It is the light-equipped automobilist who needs to be careful.

THE BOSTON-PROVIDENCE PORTION.

Of the many ways out of Boston toward Providence, the best is that which brings one the quickest into the unrivalled park system practically surrounding the city. From the Common and the Public Gardens, take Commonwealth avenue direct to and across Massachusetts avenue—the two at right angles in the outer Back Bay. At the Ericsson statue, immediately beyond Massachusetts avenue make a broad left turn into the Fenway, while Commonwealth avenue continues straight ahead. The Fenway is a narrow strip of park which, with a small portion of Beacon street, connects Harvard Bridge and the Cambridges with the extensive system south and east. Keep to the right, but without a turn, until a white strip faced with street car tracks (a comparatively recent innovation) crosses in making a short cut from down town via Boylston street. Go straight over this strip and take the first clear right out of the Fens and over into the Riverway.

The Riverway like the Fenway is a narrow strip of the park system, a sort of arboreal boundary between Boston and Brookline. The latter stately village (as it wills to be called), is over to the right, beyond the half concealed right of way of the Boston & Albany's "Circuit Line." Followed without detours, the Riverway leads into either Jamacia way or Pond avenue, and brings up to Jamacia Pond, with a choice of two roads around. The one to the right is usually preferred, along the west side of the pond, and past the entrance to the Arnold Arboretum. A short distance beyond the same road is carried under the elevated tracks of the N. Y., N. H. & H. R. R. at Forest Hills station.

Straight over past the station is the continuation of the park system into Franklin Park, but both of the roads to Providence turn right. One follows the main street car tracks and closely parallels the Providence Division of the railroad to Clarendon Hills and Readville, thence along the Milton Hills Road to Canton, to Sharon, East Foxboro and Attleboro to Pawtucket. The other follows Washington street, through Dedham, Walpole, Wrentham and North Attleboro to Pawtucket, where both roads coincide to Providence. There is little choice between them, either in riding quality or mileage. Together they make an excellent day's round trip of a trifle less than 100 miles, from Boston to Providence and return.

The latter of the two named, being in all respects equal to the former and somewhat easier for the stranger to follow, is preferred as the first stage of the run back toward New York. This course having been settled upon, turn *very* abruptly to the right after crossing under the railroad at Forest Hills station and keep *immediately alongside* the same tracks until the road (Washington

street) is carried to the other side again—which is almost at once. This gives a straightaway to Dedham, a course midway between the Providence division of the railroad and its Dedham branch. Go straight through Dedham (Memorial Hall on the right), and at Norwood village turn right upgrade for Walpole.

At Walpole, turn left at the fountain (erected in memory of men of the town who served in the French and Indian war), and go straight ahead, while the street car tracks turn off still more to the left. Go direct to and through Wrentham, and two miles beyond, again turn left, where the road-sign says 16 miles to Providence. It is now direct on Washington street into and out of North Attleboro, then Broadway and Main street into Pawtucket. Main street carries over the river into Eastern avenue, where the Providence cars start. Turn left on Eastern avenue, alongside the street car tracks, but instead of following them for the next few blocks, keep on Eastern avenue, uphill to the right. This will bring out on Pawtucket avenue and afterwards into North Main street, Providence—all one thoroughfare from Pawtucket. The actual entrance into Providence—North Main street, then by a half-turn right on Market square, on to Westminister street—is rough and unattractive; but the view of the city ahead, and especially of the new State capitol, is fine. The distance from Boston is 45 miles, and the usual running time from 2½ to 3 hours.

THE PROVIDENCE-NEW LONDON PORTION.

Westminister and Weybosset are the principal business streets in Providence, and though not parallel, they both cross the city in the same general direction. Either may be used to begin the next stage of the run—the choice being a matter of convenience if a stop be made for any reason. But if going through without a stop, the best way is to come into Westminister street (from Market square and North Main street), turning left almost at once into Weybosset street, in front of the Industrial Trust Company's building. Weybosset street goes up past the post-office, giving and unbroken and almost a straight line into Broad street, the next connecting link outbound. In the very center of the city, where Dorrance street is crossed, the Union Depot is in sight over to the right. Just above on the left is the old Benificent Congregational Church, which pass and enter Broad street by a slight left bend.

Keep Broad street to Trinity square and bend right, away from the entrance to Grace Church Cemetery. This is the end of

the stone pavement on the way out of Providence, and brings on to Elmwood avenue which, with its immediate connections, is the best thoroughfare into the country. For two or three miles it is excellent riding, leading out past Roger Williams Park and over the Pawtuxet river. At the 9-mile post out of Providence, the road turns right, passes just above Greenwood railroad station and left again in line with its former direction, insomuch that a straight line from the 9-mile post to the highway above would be carried over the top of the station.

Apponaug, a mile further on, is entered by a right bend, uphill and away from the railroad tracks. At the principal four corners in the center of the old town, turn left on to the road marked "10 miles to Wickford," coming very shortly to a fine view of Greenwich Bay, which is part of Narragansett Bay. The road is direct though by no means straight, through East Greenwich and to the immediate entrance into Wickford. Unless desired to go down into this place, keep right (road-sign reads to Allentown), and thus avoid an unnecessary loop, in and out again on to the same road.

In case you do go into Wickford, turn right at the center of the town (straight ahead leads to the water-front), pass the principal stores, and right again where another left runs down to the shore. This detour in and out of Wickford is an extra mile or so, but it is good riding and gives the best opportunity for supplies between Providence and Westerly, for which reason it is more frequently entered by automobile tourists than it otherwise would be.

Allentown is nothing, and Pender's Corners, just beyond, merely a turning point toward Kingston. Take right at this point and $4\frac{1}{2}$ miles beyond another right into quaint old Kingston village. Go straight through, down Kingston hill (smooth, but long and very steep), to and past Kingston station, across the railroad and turn left alongside the tracks. The next 15 miles are the most annoying on the trip, but on the whole more difficult to describe than to follow. In effect, the road zig-zags along the railroad tracks, now on this side, now on that, without the slightest trace of system, and little of direction; and at one point (Kenyon's Station) it actually doubles on itself for a short distance. From Kenyon to Shannock the distance is $\frac{7}{10}$ mile by railroad; by road it is nearer 2 miles.

From the depot in Shannock, go down hill and by the same discouraging road through Hopkinton to Ashaway, the latter a small mill town important only as marking the beginning of better

things. Here turn right and follow the better road—telegraph poles all the way—6 miles or so to Westerly. Keep downtown to the post-office (in front also of the Dixon House), where bend somewhat to the right, go over the little Pawcatuck river and under the railroad viaduct where turn left, the sign reading 16 miles to New London via Stonington and Mystic Bridge. Old signs, seen occasionally along the way, especially one just out of Westerly, point via Old Mystic further North, but no attention should be paid to them.

Coming into Stonington village, pass the queer little library set in the middle of the spacious park and on to the railroad station. Cross the tracks and ahead a short distance, keep left, this particular section being a "long way about" caused by the irregularity of the shore, which the railroad takes in a straight line. The road now followed connects with East Main Street to Mystic Bridge, which cross. Take first left after clearing the town, then first right, the better to get over the long hill that looms up ahead. Contrary to what one might expect, the rest of the distance to New London is hilly, with fine views of the Sound and of the shore crowding one another. The route leads above, not to Noank and through Poquonock Bridge to Groton.

The last stretch is somewhat confusing as there are three different roads between the two points. One known as the "Lower Road" branches off to the south about a mile west of Poquonock Bridge, at what is called the "Avery Memorial Monument," entering Groton about a mile south of the ferry and opposite the plant of the Eastern Shipbuilding Company. Thence it is the river road to the ferry. The other two roads form a Y a half-mile beyond the "Avery Monument." Of these two, the one to the south, known as the "Treadway road," crosses the railroad a half-mile beyond and brings up at the top of the hill directly above the ferry slip. The other branches to the north at the Y already named, thence over "Long Hill," and coming into the river road a quarter-mile above the ferry. The middle or "Treadway road" is to be preferred not only as being the best and shortest of the three, but as bringing immediately to the ferry. Here across the Thames to New London, landing near the Norwich Line steamers' dock, and alongside the N. Y., N .H. & H. R. R. depot. Cross the many tracks at grade, straight over into State street and the center of the city—70 miles by road from Providence.

The monument at the intersection of State and Bank streets, New London, in sight as soon as the railroad tracks are crossed in coming from the Groton ferry, marks the beginning of the final run to New Haven. Take Bank street out, but instead of turning off with the car tracks, keep up over a large hill to Niantic, entering by a causeway over the Niantic river. Go straight through the town and 4 miles beyond, turn left, where the road-sign points toward Lyme. In old Lyme (no finer rows of elms in all New England), bend around the church and down to the ferry, a half-mile or so, cross ferry, go straight ahead for a short distance, then left into the broad macadam of Saybrook. Keep on well through the town—which is principally one long street—and on the lower end one fork leads to Saybrook Point, and the other to Westbrook. Take the latter, 5 miles mostly over new and good roads, to Westbrook, then to Clinton over a combination between common dirt and new macadam.

Straight through Clinton into Madison, a large "V" of elms points toward you, its two sides being roads, the one on the left to Guilford, which take. At Guilford, ride up alongside the park and at the end of it (where you come into the street to and from the depot), swing left a fraction of a block to get another straightaway in the same direction. A mile or so out, take left for Leete's Island, pass under the railroad tracks at Sachem's Head station and on to Stony Creek. These last three—Leete's Island, Sachem's Head and Stony Creek—are more names than places, since this bit of country is sparsely settled. The roads average scarcely fair and at times confuse, through occasional signs pointing to Leete's Island and Stony Creek help out.

Between Stony Creek and Branford, the road forks, with no signs anywhere about. Turn first right, then left, following the telegraph poles into Branford to the public park, a short distance beyond which a turn right brings out on the last stretch to New Haven. It is a very pretty ride to and through East Haven, over two or three hills, and past Lake Saltonstall, with fine views in every direction. Keep along the street car tracks to the outer edge of New Haven, but where the cars turn right for an entrance of their own to the city proper, keep ahead with a single track. This is a good macadam road, down to old causeway with a short wooden bridge beyond, which brings into Bridge Street, New Haven, near the docks of the N. Y., N. H. & H. R. R.

Bend with the Bridge street car tracks one block right, then

first left into Wooster street (mostly paved with brick), which keep until it is broken by the uncovered railroad subway. Turn one block right into Chapel street and up (left) to the corner of Church street, the center of the city and the end of the run up from New York as well as the beginning of the run from New Haven to Springfield. This pivot of the New York-Boston circular tour is 53 miles from New London.

If returning at once to New York by road, go down Church street a short distance to Congress avenue (asphalted), where turn right to Howard avenue, to Kimberly avenue, to Elm street, to First avenue, to Main street, to Savin avenue, to Savin Rock, Milford, Stratford, Bridgeport, Stamford, etc., reversing the itinerary of the New York-New Haven district, published in the June number of this magazine.

CONNECTING "SHORE LINE" ROUTES.

There is a considerable amount of automobile travel between Boston and the summer resorts of the Massachusetts and Rhode Island coasts which does not come into the Connecticut-Long Island Sound district at all. It is a well-settled, interesting and withal an outwardly attractive country, altogether different from anything else in the United States. A network of uniformly good roads makes the conecting distances short, and the many optional ways of coming and going enable one to cover practicaily the same ground time and time again with ever-increasing interest. At first confusing to the stranger—particularly to one who undertakes to master the map in advance—actual contact soon discovers the order of it. From that time on, its pleasure possibilities indefinitely multiply.

The routes from Boston and its environs to Plymouth, New Bedford, Fall River, Newport and elsewhere in this section will be given in detail as early as possible in these pages. Meanwhile, as our facilities do not wait upon publication, subscribers' inquiries concerning them will have the best attention of our information and correspondence departments if they will only take the trouble to write and ask for the information direct.

The better to round out the outline of the Boston-Providence district, an additional dotted line is drawn on the map between these termini, through Canton, Sharon, East Foxboro and Attleboro to Pawtucket. This, joined with its counterpart, makes a round trip of just less than 100 miles easily covered in a day and suitable

as well for an inter-state club run. In the old bicycle days, this kind of tour was very popular in New England, and it ought likewise to be made a feature in automobiling.

Wickford and Narrangansett Pier belong to the Providence-New London district, and are reached directly from the route between these points as given in this issue. Wickford is immediately off the line, and Narragansett Pier eight miles from Kingston Station over a good macadam road, which latter will be appreciated whether comes into it from the east or west, for the approaches to Kingston Station are far from good. Wickford is 22 miles from Providence and 67 from Boston; Narragansett Pier, 38 miles from Providence and 83 from Boston. Either will make one fair day's run from Boston or two days' from New York.

Stonington, in Connecticut, shortly after leaving Rhode Island, is hardly more than a point in the Providence-New London portion. But as one passes through the center of the village, a Stonington Line steamer is very likely to be seen anchored in the harbor, giving direct weekday service to and from New York. New London itself is an important point, as here the usual routes from the Norwich-Williamantic District are brought into the Shore Line. Connection is also had by water with New York direct as well as with the towns on the eastern end of Long Island—the latter a necessary link in any Long Island-New England tour. Saybrook and Lyme—on opposite sides of the Connecticut river and connected by a quaint old ferry—are gateways to and from a number of small towns directly north. They are also intermediate landings for the New York-Hartford steamers up and down the Connecticut.

New Haven is a veritable Hub of routes, as these three papers on the New York-Boston district have shown. But aside from these through lines, they are Connecticut locals interesting in case one has the time to search them out. Singularly enough, New Haven, Wallingford and Meriden are popularly considered Connecticut river valley points—an error which arises largely from their close association with Hartford and Springfield immediately above. But the Connecticut takes a broad easterly bend at Middletown, finding salt water at Saybrook Point, nearer New London than New Haven. Increasing commerce between New York and the middle and upper valley could not long accommodate itself to this roundabout course, and has built prosperous cities and towns on the

direct way, while the river points dwell in the security of comparative isolation.

Tours nowadays by road to and through the Connecticut river valley usually start at New Haven, without thought of that part of the real valley below Hartford. From Hartford, they follow the Springfield line, as given in the last number, thence across the river to West Springfield and up to Holyoke. Northampton, South Deerfield and Greenfield are in the same line in Massachusetts, with Brattleboro and Bellows Falls in Vermont. All this is practicable touring ground for automobiles, and helps to substantiate the claim that New England has to-day more to offer the road-traveler than any other single section in the United States.

Worse Than Creeds

"Did you hear of the split in the Church of the Extended Invocation?"

"No; I haven't heard. What could it be about? I thought the members of that church were the most united in the city."

"They have always borne that reputation, but there is trouble enough there now."

"What about?"

"The members decided to give their pastor an automobile so he could more easily make the round of his parish, and, after the money had been collected, the question of whether it was to be a steam, an electric or a gasolene vehicle came up, and you can easily imagine the rest."

She Made a Hit With Him

"Yes, I saw Miss Rushmore last evening, and she struck me as"——

"Oh, yes, as being more beautiful than ever?"

"No. She struck me as I was trying to cross Fifth avenue in front of that big tonneaued car she scorches around in, but I can't say that it was her beauty that made the most impression on me when we met."

A Universal Complaint

This speeding craze has grown so great
  Dame Nature is affected.
For days the giddy creature has
  In scorching been detected.

An Unexpected Obstacle

"LYNCH him! Lynch him!" The cry goes up from a thousand throats like the roar of a wild beast thirsting for blood. With incredible swiftness the desperado is tightly bound and carried to a convenient tree.

Then the leader of the Vigilantes, his features distorted with hatred and the lust for vengeance, prepares to adjust the noose around the culprit's neck.

At that moment the doomed wretch whispers something in the leader's ear. To the complete astonishment of all present, the latter drops the rope as though he were stung and bursts into a flood of tears. As soon as he can speak he addresses the bewildered crowd as follows:

"My friends, I cannot do it—I cannot have his blood upon my hands! Yes, you may well look amazed, but I am perfectly sane. I am aware that this man is a cold-blooded assassin, a very fiend in human shape. But he has just informed me that when he was an alderman of Frog Centre he introduced and passed an ordinance prohibiting automobiles from proceeding through that city faster than two miles per hour under penalty of $1,000 fine and life imprisonment for each offense"—here the speaker's voice choked with emotion. "Gentlemen, I ask you as fellow horsemen, can we, can we harm such an intelligent citizen as this?"

OPEN TO SUSPICION.

"My doctor has advised me not to buy an automobile."

"Heavens! He must be a quack."

Catalytic Sparking Plugs

WRITING to *La Locomotion*, Dr. Paul Gans de Fabrice describes how he constructed an ingenious sparking plug to work on the catalysis principle. An ordinary sparking plug was taken and the platinum points were shaped to form two studs at some distance apart. Attached to these studs was a spiral coil of fine wire composed of an alloy of platinum and rhodium. A weak current passed through this wire causes it to become incandescent, and the motor can at once be started. The heat from the subsequent explosions keeps the wire sufficiently heated to explode the charges, so that only a small quantity of current is required at starting.

From this it would seem that the speed of the engine is entirely governed by the throttle lever, or else the greater the amount of mixture admitted to the cylinder, the earlier it is fired, and inversely, the less the charge, the later the moment of combustion. If our ideas are correct it is at once evident that this Fabrice form of ignition does not admit of a motor being run under the best and most economical conditions, *i. e.*, a small charge fired early, and further there would be a tendency to overheating. Dr. Gans de Fabrice, in his letter, however, says he has used this form of ignition on one of his cars for the past four years, during which time it has given him no trouble and complete satisfaction in every way.

Merely a Woman's Argument

Mrs. Hohmboddie—"Now, for goodness sake! don't look surprised and disgusted and injured and resigned when you hear what I am going to say."

Mr. Hohmboddie (with fortitude)—"I'll try not to."

Mrs. Hohmboddie—"Well, I want you to get me an automobile."

Mr. Hohmboddie (after an amazed silence)—"An automobile? For yourself?"

Mrs. Hohmboddie—"Of course for myself. It isn't likely that I want to present it to the cat or the parrot."

Mr. Hohmboddie—"No; but scarcely a month ago you said the sight of a woman dressed up in goggles and a meal bag coat sitting in an automobile made you blush for your sex."

Mrs. Hohmboddie—"So it does; but I am going to have an automobile all the same, and I am going to learn to handle it, too.

I know I won't enjoy it one bit, but do you suppose I intend to stay quiet at home and let all the other women in the street go careering off in automobiles while I am sitting like a mummy watching them?"

Mr. Hohmboddie—"My dear, mummies don't watch people."

Mrs. Hohmboddie—"No; I can't be odd—I must be like other women. And that is why I want you to get me an automobile—if I am only seen in it twice.

Military Automobilism

GEORGE E. WALSH

THE automobile seems so eminently fitted for pleasure purposes that it is somewhat of a distortion of its original object in life to convert it into an engine of warfare; yet so progressive are modern military experts in adopting every imaginable invention for their particular line of work that the automobile appears destined to create as much a revolution in transportation in times of war as in times of peace. The development of the war automobile has been fully as rapid in the last few years as those designed for ordinary riding. Germany in particular has striven to construct practical war machines out of automobiles, and some quite remarkable tests and experiments have been made by the military authorities of that country.

There are two distinct purposes kept in view in developing war automobiles. One is for the simple purpose of transporting troops rapidly over a country that has not been provided with railroads. In Austria-Hungary, the Minister of War has lately had a number of automobiles constructed for this purpose. These war machines practically represent an entirely new type of transport. They are the heaviest motor vehicles yet constructed, and are intended to carry troops over rough country at an average speed of twelve to fifteen miles an hour. Each vehicle has a capacity of five tons, and this will be sufficient to carry forty soldiers with their necessary provisions and equipments. A score of such machines would be able to carry a respectable sized army across country in a short time. The success of the experiments seemed to justify the Austrian army in carrying on further work in this line.

The second line of development of the military automobile is for the purpose of carrying small field or Maxim rapid firing guns. The gunners and operators being protected from the enemy

by shields of nickel steel plate. With the shield in front of them they can run their formidable automobile down upon an army, and almost annihilate a body of infantry without exposing themselves to any great danger. In the German army a number of these motor-maximites have been constructed and tested so satisfactorily that more of them have recently been built. When these are completed the German army will have more than a dozen mechanical gun movers in the field equipped with Maxims, and the small automobile cavalry thus organized will be quite able to attack almost anything in the way of light soldiery.

Germany learned much from England's experiments with the armored cars in South Africa last year, and military experts were sent there to investigate the practical field tests of these new war horses. The armored cars which the English operated were all right except that they had one very weak point. They were easily derailed and their progress or return over the railroad line easily obstructed. They were thus rendered almost helpless by a band of quick horsemen which could double on their tracks and tear up the rails in the rear. This necessitated repairs by the soldiers under the exposure of sharpshooters on distant hills. The effect of the armored railroad car was thus totally neutralized by simple military tactics.

But it is reasoned that the military automobile, carrying its Maxim guns and soldiers, could not thus be crippled. There would be no track to tear up, and the automobiles could return across country where no enemy could possibly obstruct their ways. There would of course be certain parts of the wild country where the operators might be entrapped so that it would be impossible to escape without running back over a narrow road. But that would be the fault of the operators rather than of the machines. The modern military automobile is intended for the open country, and not for narrow, mountainous defiles where a mobile, wandering band of horsemen could entrap them.

Finally there is another field in military tactics for which the automobile is eminently fitted, and which the French have so far perfected better than any other nation. As armed scouts the modern high racing military automobile is of the greatest possible promise. The machines built for experimenting in the French army are of the heavy fast type, with speed and durability emphasized above anything else. They are capable of rushing across country so swiftly that they would quickly outrun anything which might be sent in

pursuit. At the same time, the operators being protected by steel shields from any ordinary rifle bullets, they could approach the lines of the enemy far better than any other scouts could. Their only possible enemies would be other armed automobilists or artillery concealed in some unexpected place. No infantry or cavalry could hurt or overtake them. Messages could be carried in this way with impunity, actually dashing through the sentry lines of the enemy, and riding close up to the inside posts of a camped army. The races which would follow would be exciting in the extreme and full of interest to the daring.

The automobile scouts of the future will also be provided with military balloon equipments for quick and accurate observation in the field. The automobile carries the balloon, coil of leading rope, and the necessary implements for inflating the balloon. The automobile can in this way run quickly across the country to some favorable point of observation, and then the operators can inflate the balloon and make an ascension. The whole equipment is compact and complete. A telephone connects the balloon with the automobile, and the operator of the latter proceeds in any direction indicated by the aeronaut. In this way the automobile carries the balloon nearer or further away from the line of the enemy. The observations from the car of the balloon can be taken from a dozen different points of view. In the event of an unexpected attack from cavalry, the automobile would be ready for resisting it. The cable of the balloon could be quickly wound up, and by the time the cavalry approached within shooting distance the automobile would be ready for a savage attack. With the steel shields raised in sloping positions, the bullets of the enemy would have little chance to touch the operators, while the sharpshooters from behind the shields could pick off the horsemen with ease.

Meanwhile the power of the automobile could be shown in another way. With a speed that no horse could hope to equal the machine could charge down upon the cavalry and disperse it. No horseman would be foolhardy enough to wait for such an attack. There would be a complete and demoralizing retreat. The automobile could fight a retreating battle equally as well as a front one. While running rapidly from the enemy it could train its guns on them and fire with pretty fair precision. On the whole the automobile party would be far safer than cavalry or infantry, and so long as the machine kept to the open country and steered clear of batteries it would have a fair fighting chance to escape from almost any trap

laid for it. This is so generally appreciated by the military authorities of Europe that extra heavy types of these modern Juggernaut war machines are now in the course of preparation.

Military automobilism furnishes a variety of sport which, in times of peace, has its excitement and risk not generally obtained by those who operate their machines merely in the interest of personal recreation. In Europe the military chauffeurs are practically exempt from local restrictions concerning speed, and their endurance and speed tests are conducted in a manner to excite the interest of any one familiar with automobile matters. The military automobiles have the right of way in Germany and Austria-Hungary at certain times of the year, and in specified parts of the country, and they are rushed across the country at their highest possible speed. The automobile courier is first entitled to all the privileges of the highway, and the high speed machine must make a record or lose the honors held out for the quickest in the races. These automobile couriers instead of following some fine, well-graded public highway, are supposed to cross the country and go through narrow and rough by-paths which would test the skill of the best chauffeur. The result of such speed trials is not to lower any race record such as we are accustomed to hear about in ordinary races on good roads, but the experiments show the value and durability of the machines, and testify to the skill of the rough riders. For, in truth, the military automobile courier is a rough rider of the most modern type, and he performs tricks and evolutions in the fields that might well eclipse the work of the best cowboy on his broncho.

The military evolutions of the automobiles carrying Maxim guns are no less interesting, but of a somewhat different appearance. They select likewise the wide open country, and the machines are driven at great speed across the country where few if any decent roads connect distant points. The machines must be heavy and durable enough to make these rough trips in all kinds of weather, and the operators are not by any means sparing on the machinery or their own nerves. It is the nearest approach to rough riding in a modern battle as could very well be imitated.

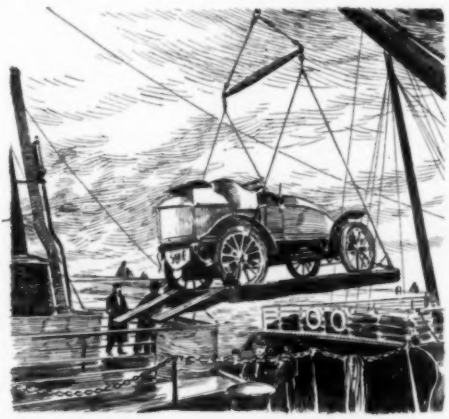
His Proficiency as a Linguist

Brown—Are you anything of a linguist?

Jones—Well, I can read and understand French, German, golf, and automobile, but I can't talk 'em.

Out of Its Element

WHEN it comes to transporting an automobile other than upon its own wheels and by its own power, the problem is by no means an easy one. Take for example the subject of the illustration herewith. Serpollet's famous "Easter Egg" has been to England and its owner wishes to return it to France. Manifestly the vehicle cannot cross the channel by any other means than a vessel, and the picture shows the big vehicle poised in mid-air just before it is lowered into the hold of the steamer which is to bear it back to its native land. This little bit of aerial automobiling, with its subsequent couple of hours of sea voyaging, costs the owner of



the vehicle about $100, which shows how much more expensive it is for an automobile to travel on water than it is for it to do the same thing on land.

An Exception to the Rule

'Tis said the auto is a foe
  To all the aches and pains;
That only healthy blood can flow
  Through every motorist's veins.
And yet 'tis noted when they come
  A-scorching down the line
That many drivers suffer from
  A curvature of the spine.

It Was No Hampton

IT had taken considerable persuasion to induce the old lady to take a seat in an automobile, but finally she had consented to do so because she was anxious to reach the bedside of her sick grandchild in a village some twenty miles away, the last train for which had left some ten minutes before she arrived at the station.

When the owner of the big automobile, who was touring through Long Island, had overheard the old lady's regrets at being left he had insisted on her accompanying him, as he was to pass through the particular one of the half a dozen or more Long Island villages named Hampton where the sick grandchild lived. Everything went lovely until the almost flying vehicle in attempting to pass a wagon loaded with hay which occupied the entire center of the road went unexpectedly into the ditch and rather violently deposited its occupants in an adjoining field.

Recovering from the shock, though somewhat confused from the rather unusual method of alighting from a vehicle, the old lady asked of the chagrined chauffeur:

"Is this a Hampton?"

"No ma'am," he managed to gasp, "this is an accident."

"Oh, dear!" said the ex-occupant of the vehicle, "then I hadn't oughter have got out here, had I?"

But such naivety was too much for the owner of the damaged vehicle, and he said the only safe thing for one in his position to say—nothing.

Right up with the Times

"Our missionary tells us that the automobile is even pervading heathen India."

"So the benighted natives are learning to scorch, eh?"

"No, not to any great extent, but they have fitted the car of Juggernaut with a motor and a crack chauffeur, and the combination is doing great business."

The New Code

Motor and the world motors with you;
Walk, and you walk alone,
And you can't get into society
If you have no auto of your own.

Wheels of Automobiles

SIDNEY RUSSELL

NO detail of the modern self-propelled carriage is more worthy attentive and careful study or will better repay the time spent on their suitable designing than the road wheels of the vehicles. It may be, perhaps, worth while to briefly review present practice in this direction, more particularly in relation to high-speeded passenger vehicles, since it is certain that as higher speeds are called for more attention must be given to the provision of suitable road wheels to sustain the increased strain such speeds necessarily involve.

The history of the wheel as applied to the self-propelled road carriage (or to use its modern designation—the automobile) is sufficient in itself for a lengthy treatise but this cannot be here dealt with, the purpose being to show briefly the usual forms of wheels adopted (as above stated), with their advantages and corresponding disadvantages.

In the lightest class of automobiles—that of the motor cycle—we find the wire wheel is naturally universal, the tangent spoked variety being practically the only form. The great advantages of tangental spoke construction are increased rigidity and the direct pull transmitted from the hub to the rim; in addition to these the replacing of a spoke, should it be necessary, is both simple and easy. Speaking from considerable cycling experience, the writer has proven these advantages by the crucial test of the user, indeed in the earlier period of cycling when pneumatic tires were unknown, the great rigidity of the tangent-spoked wheels was often very unpleasantly conspicuous. On the other hand the direct-spoked wire wheel (*i. e.*, where each spoke is carried direct from the rim to the hub into which it is screwed) has been proven too elastic when used as a driving wheel, the force exerted tending to bend the spoke rather than being transmitted by it in a straight line to the rim as it is in the tangent pattern. In an attempt to avoid this a compromise was effected by the cycling experimenter employing a tangent-spoked wheel as a driver and a direct-spoked one for a steerer, but the introduction of the pneumatic tire forever rendered these expedients unnecessary and the tangent wheel returned—this time permanently—to popularity.

Coming to the next class of vehicles—the light autocar—opinion in this country is at present much divided. On the one hand

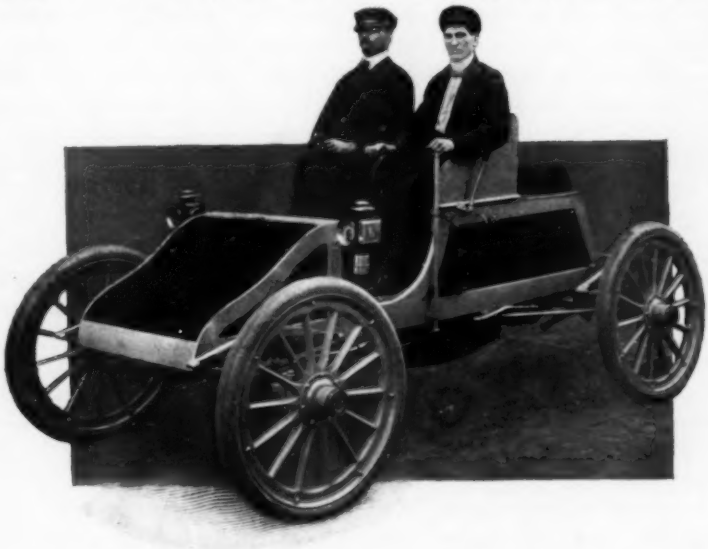
the wire-spoked wheel is cheap, readily understood by mechanics accustomed to the ordinary work of a cycle factory, there is less windage than with the wooden wheels, and the wire one is much the lightest of the two. Against this may be set the drawbacks that it is difficult to repair if the rim is badly buckled or many of the spokes injured, and it is not easy to keep clean. While in many cases it also imparts a fictitiously light appearance to the car to which some persons take exception. The objections are not so fanciful as on the surface they appear to be, but for light work it is probable that either type is equally efficient. As regards practical examples the popular Locomobile is an example of the success of the wire wheel when carefully designed and applied.

Above the voiturette type of car the fashion here and on the continent is the Madras artillery wheel, so called from the circumstance of this pattern having been adopted in India early in the nineteenth century for the wheels of field guns and for similar purposes where the wheels were exposed to extreme temperatures. In addition this form of a wheel readily permits of a damaged spoke or spokes being replaced without removing the tire from the wheel.

The introduction of this wheel into England for the equipping of automobiles the writer is of opinion is due to Mr. Walter Hancock, of Stratford-Essex, who employed them on his steam omnibuses about 1834. Indeed the excellent results attained by him may fairly be said to be largely due to the adoption of this type of wheel elsewhere.

The construction of this artillery wheel is so well known as to scarcely call for a lengthy description; the method usually adopted in building it is to accurately gauge and finish each spoke with long tapering or wedge shaped ends. (Hancock termed his wheels "wedge wheels.") These fitting closely together form the hub of the wheel (that portion as usually understood being absent). Two stout side plates are secured by bolts, one each side, or in the form usually adopted by modern builders the inner plate is in one with the box of the wheel, the outer plate thus taking the form of a large washer and the bolts passing through the spokes binding the whole strongly together. It will be seen that in this form of wheel there is really no hub at all, but great lateral strength is given by the bolts before mentioned, and it is comparatively easy to replace a damaged spoke. Various differences in detail occur in modern examples, the principal forms of which will be dealt with later, but the main features of all this type of wheel are practically the same.

Before dealing with these,however, reference may be here made to another form of wheel which the author believes to be of even older date than the one previously mentioned. This is known in England as the "Craskill" wheel from its inventor and was introduced some time previous to 1848 for farm carts and wagons. In this wheel the hub is of cast iron with pockets into which the spokes are driven tightly and the outer ends turned for the felloes by a special machine to one gauge. This wheel, however, or something very like it, has



L. D. Munger, the well-known tire inventor and manufacturer, and J. W. Howard in the steam racer built by the latter. In a recent trial this vehicle is said to have covered a measured mile in 51 seconds.

long been well known in the United States, where the writer believes it really originated. It is occasionally employed in England for heavy motor wagons, since it admits of a much cheaper construction than the more costly but more durable "artillery" wheel, but care in the construction of this type should always be taken to see that the spokes are not only sufficiently stiff for their task, but also as far as possible are relieved of direct driving strain, for if this condition is not complied with they have a tendency to snap off close to the hub.

To return to the "artillery" wheel—the greater part of the automobiles built in England and on the Continent are fitted with this form of wheel, so constructed that the spokes stand upright, being termed "cylindrical wheels," or sometimes very slightly dished, but there are one or two notable exceptions wherein this construction is departed from, and a form adopted which if more costly to construct certainly seems by its additional strength to compensate for the additional outlay. In this improved pattern the wheel is really double dished, the spokes being set alternately from each side of the hub in almost precisely the same manner as the spokes of the wheels of a traction engine are.

Another costly and consequently not very common type of wheel may be mentioned, although there are few instances of its application to modern self-propelled vehicles. This is the "Disc" wheel, which in either wood or iron is extremely stanch, but has drawbacks which are quite sufficient to account for its being seldom employed.

As to light vehicles, it will be remembered that many of the New York electrical cabs were originally fitted with a very neat and light form of this wheel built up of two sheet steel disked plates with a bent wood rim between them and the outer tire flanges, the same bolts holding all together.

With heavy vehicles good results have been obtained with a composite wood and iron wheel very much resembling the well-known "Mansell" railway wheel, but it is needless to remark that a wheel of this description is not only heavy but very costly to manufacture, and it is quite possible that this is the reason why it has no following now. The experience with these wheels by such an authority on the subject as Mr. John Thornycroft will presumably be of interest. According to a paper read by this gentleman before the British Association at their Dover meeting in 1899, after speaking of the advantages of a divided or false tire placed over the tire proper, he said:

"The steel disk wheel is, however, though very satisfactory in service, a rather heavy construction, and in later vehicles the wheels are of wood. . . ."

A drawback of such wheels when applied to very light automobiles such as motocycles would certainly be the resistance offered by the wheel to a quartering wind, this being the direct cause of their abandonment when introduced in 1891 or 1892 for bicycles. A wheel of this kind was experimented with by the great French

cycle house of Clement et Cie. in an attempt to produce a bullet proof cycle for war purposes, but was eventually abandoned even for that.

A few words on the hubs as regards modern practice may not be out of place.

The lighter forms of wire wheels of course are provided with the usual cycle type hubs of steel or gun metal, the design of these calling for little remark. The heavier patterns already referred to also call for little comment except in so far as they are modified by the transmission arrangements. In by far the greater number of cases where wood wheels are employed for an automobile and where a countershaft-mounted differential is made use of the gear wheels or sprocket wheels are bolted to the wood spokes—an unmechanical and pernicious practice, but one which has apparently received the approval of almost all builders here. A notable exception to this is the wheel patented by Mr. Crowden of Leamington (England), where the hub (otherwise like an artillery wheel hub) is cast with a disk or flange to which the gear wheel is bolted exactly like a flange coupling. The same principle has later been adopted by Galliardet of Paris as far as the hubs are concerned, although the sprocket wheels are bolted to the spokes as before.

Spring transmission arrangements such as that of the Thornycroft vehicles are very successfully employed on heavy automobiles to relieve the wood spokes of direct driving strain, but for lighter vehicles there does not seem to be the same necessity for their employment. A praiseworthy plan (where the faulty method of bolting the sprocket or other gear wheels onto wood spokes is adopted) is to secure the gear wheel as near as possible to the felloe of the road wheel; consequently the spokes are relieved of much of the twisting strain of the gearing.

These remarks on a very wide and interesting subject which, in view of the present tendency to higher speeds, is bound to become still more so, are necessarily brief and fragmentary, but it is hoped will not only serve to roughly outline modern practice, but to indicate the lines success may ultimately be found to follow.

Cranbrook, Kent, England.

Added to the List

"Maud says she's wildly in love with her new automobile."

"Huh! Another case where man is displaced by machinery."

How to Break a Horse to the Automobile

IT is the duty of every owner of an automobile to do what he can to overcome the prejudice which exists against the motor vehicle. As a rule those who are most violent in their opposition to the new vehicle are so more on account of the trouble they are put to through their horses becoming frightened, rather than from any personal dislike of their own to the new conveyance. Remove the fear of the horse and at once you remove a very great portion of his owner's opposition to the automobile. To aid those who, recognizing their "duty to others and to themselves," are willing to teach the horse to no longer fear the mechanical carriage, the Automobile Club of America has notified its members that the following methods of curing a horse of auto shyness have been tried and found satisfactory in almost every case:

Select a place, if possible, a small square in your town where the road is wide, or a mile of wide road where there are no ditches. Have the horse or horses to be trained driven five or six miles sharply before the lesson begins. A well fed animal just taken from the stable is apt to feel so good that he will cut up on the least provocation. The horse to be trained, if possible, should be harnessed alongside of a horse that is accustomed to automobiles. If this cannot be done he should be driven. It has not been found satisfactory to lead or ride a horse in breaking him in to an automobile. Under these circumstances he is too free and too little subject to control.

First Lesson: Send the automobile around this square or along the road at about six miles an hour. Have the horse which is to be trained follow the automobile at a distance of about ten feet. He will do this without protest. Let him follow the automobile for about fifteen minutes. Then have the horse pass the automobile, leaving it on the off side or right hand. The horse will probably shy a little away from the vehicle. Do not attempt, if the road will permit, to hold him up to the automobile or to whip him on the near side, but let him shy. As soon as he has passed the automobile he will probably break into a run. Do not check him too suddenly, but speak to him, and he will soon come down to a slow trot. Then have the automobile speed up and pass the horse, leaving him on the off side or right hand. Repeat these operations five or six times for another fifteen minutes. The horse will have become so accustomed to the automobile that he

will no longer shy and no longer try to run in passing it. A horse is really a very nervous animal and his lesson should not be too long; thirty minutes of this is enough for the first day.

Second Lesson: The first morning's proceedings should be repeated for say ten minutes. Then the automobile should be stopped at the side of the road and the horse should be turned around so as to face it. The engine of the automobile, if it is a gas engine, should be slowly rotated. The horse will shy a little. He should repeatedly pass the automobile while stopped in this manner for say ten minutes. Then the automobile should be set in motion slowly and he should pass it for ten minutes more, after which he should be sent to the stable. It will be found that he has gained considerable confidence and that he will shy but little. The occupant of the automobile should call out to the horse when he is passing, in a loud voice, "Whoa, boy!"

Third Lesson: The third morning the animal should be taken out and made to repeat or review all that he has learned on the first and second mornings, which repetition should occupy fifteen minutes. It will then be found that he will probably not shy at all, and the automobile may be speeded up and he may be passed when facing it at considerable speed. The horn should be blown gently at first and later on vigorously. The occupant of the automobile should call out to the horse when passing, in a loud voice, "whoa, boy!"

It will be found, if these foregoing instructions are carefully carried out, that there are but few horses who cannot be made to pass an automobile at a high rate of speed with safety in three lessons of thirty minutes duration each.

The point to be particularly pressed upon the teacher is to always let a horse shy in passing an automobile, if the road will permit. There are occasions where the road is so narrow, and the ditch so abrupt, that not only a horse must be kept up to the automobile, but he must be struck smartly with the whip to keep him from turning around and to prevent his capsizing the vehicle in the ditch.

It is quite useless to whip and spur a horse up to an automobile and try to force him, by giving him pain, not to be afraid of it. It is also a bad practice, in driving a horse past an automobile, to stop the horse and have the automobile proceed past him. He is frightened and very apt to turn around. The proper way is to stop the automobile and let the horse be driven past it.

If drivers of automobiles would proceed slowly in passing horses, and if when they see that the horses are frightened, they will stop, there will be no accidents caused by horses.

They Spoke as They Passed By

The motorman clanged his gong.

But the driver of the big motor truck paid no attention to him.

The motorman clanged again.

The conductor sounded a 4-11 alarm and yelled.

But the driver of the motor truck paid no attention to him.

Again the motorman clanged his gong.

"Get out of the way, there, you blank-dashed coal oil burning idiot!" he said.

But the driver of the motor truck paid no attention to him.

Going placidly along in the track at the rate of about four miles an hour, he was taking no chances of being arrested for scorching, and smoking his pipe, he sat with humped shoulders slouching over the steering wheel, lost in thought.

A few blocks ahead was the crossing of another street car track.

On reaching this crossing he turned slowly and deliberately to the right.

The motorman, wild with wrath, shouted at him as the car sped by:

"— — — — — — — ! — — — — — — — ! — — — — — — — !"

Then the motor truckman slowly and deliberately took his pipe from his mouth and replied substantially as follows:

"— — — — — — — ! — — — — — — — ! — — — — — — — !"

Then he replaced the pipe in his mouth and motored placidly on, lost in thought.

That Was What

"What do you want to sell that new runabout for, now that the season for using it is just beginning?"

"For $500."

The Three-Year-Olds

Alas, poor infants! what a lot
Of sorrow you must feel!
Too big for baby carriages,
Too small for an automobile!

MAINLY ABOUT MEN AND MOTORS

THE French chauffeur—erroneously supposed to be indispensable by many wealthy autoists—is being gradually supplanted by his more expert and not less trustworthy American prototype. The latter has heretofore been considered unsafe and too brusque to handle a French motor, though why anyone should have such an opinion is to my mind misty indeed. In the first place the French motor is simple and in many cases even more fool-proof than many of the American type, the multiplicity of cylinders notwithstanding. Relying therefore upon the evident desire of the American buyer of a foreign automobile to "own" a real, French chauffeur, your automobile caretaker from over the ocean has surrounded his almost sacred and eccentric person with that "I am indispensable" halo which has led him to abuse those whose ignorance he has played upon.

Some of us who "took in" the New York to Buffalo Endurance Test last year, fully remember the unwillingness of certain of these French autocrats to undertake the journey; in fact it was openly charged that more than one of them put their employers' vehicles out of commission in order to relieve themselves of the hard work which would result from competing in the test. With their lack of knowledge of the English language (which they don't care to acquire) and with the corresponding lack of any knowledge of French on the part of many of their employers, the French chauffeur can do pretty much as he likes, and has only to throw his arms about and shout a few excited words in French when he does not want to do certain things, to cause his indulgent

and ignorant employer to bow to the superior knowledge of his French automobile importation.

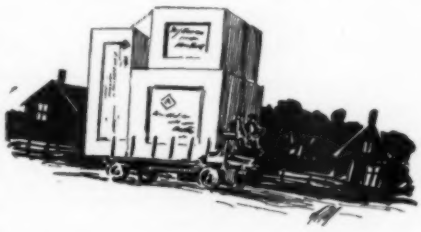
I was told a good, true story about a French chauffeur recently which fairly illustrates the arrogance and cupidity of these gentry. It seems that a member of Collis P. Huntington's family bought three ten-thousand-dollar vehicles in Paris, and at the same time engaged an expert chauffeur at twelve hundred dollars a year with board and lodging thrown in, to care for the vehicles. The contract, as is the case with nearly all French contracts, favored the Frenchman, since it provided that if the American discharged the Frenchman before the year was up, the Frenchman was to get his salary in full and a return ticket to France. After reaching America someone offered the Frenchman more money than Mr. Huntington was paying him under his contract so Mr. Frenchman set about looking for a way to break his contract.

Mrs. Huntington had an American chauffeur who had been temporarily incapacitated from fulfilling his duties through an accident. Desiring to make a call she ordered her husband's French auto expert to take her out in one of the vehicles belonging to her husband, which vehicle the Frenchman was under contract to care for and to run. Here was "Johnny Crapaud's" opportunity to break his contract, and at the same time pay a compliment to the astute French attorney who drew it. The contract provided that the French chauffeur should only drive Mr. Huntington, so he declined, with many shrugs and lingual flourishes, to drive Mrs. Huntington. When the lady indignantly—and rightly so—complained to Mr. Huntington, the latter promptly paid off his French beauty, who demanded and received his twelve hundred dollar fee and a return ticket to France, although his year was as yet not half up. After a pleasant visit to his Parisian home, he returned to America to accept the new position, having faithfully observed his contract with Mr. Huntington by going back to France. There was nothing in the contract about his not being able to return within the year.

The following remarks must not be understood as an attack on the Automobile Club of America, because in my opinion, that body has already troubles enough from the automobile "unwashed" and needs no more heaped on it by the friends of the motor vehicle, of whom I have the honor to be one. Of course, the A. C. A. is not exempt from criticism, and at times the correcting rod, judiciously laid, does almost everyone some good, for did not the wise Solomon say: "Spare the rod and spoil the child"?

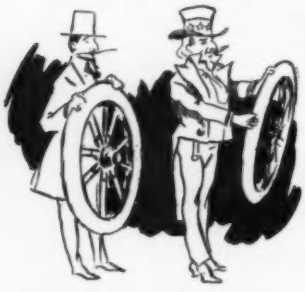
The undue haste of the A. C. A. in rushing into print immediately after the Baker accident in the Staten Island speed tests was, I believe, an unnecessary blunder. It was a distinct catering to the clamor of a lot of anti-automobilists egged on by a section of the yellow press, which should have been ignored entirely. Not a line in defense of the automobile did I see in any of the papers from the A. C. A. leaders, though columns of abuse of the automobile duly appeared. A few of us, however, got our Fabers working, and without any desire to place laurels upon our own brows, let it be known that we served our guns so well that the yelpers ceased their clamor in much less time than they really cared to. Of course the dailies were glad to get the copy we sent them, since it was taken as direct recognition of their great importance.

The Automobile Club of America might also pay a little more attention to the correspondence of its members, even if the powers that be do not think along the same lines as, for instance, Ralph L. Morgan, of Worcester. This splendid specimen of young American manhood wrote to the A. C. A. suggesting that trials of motor trucks might be held annually to a great advantage, since many manufacturers, as well as many merchants, are vitally interested in the subject of economical delivery wagons. To Mr. Morgan's suggestion the A. C. A. did



not even deign to reply. This treatment of their fellow member caused much surprise in Worcester and elsewhere.

Speaking of Mr. Morgan and the Morgan steam trucks, the writer was greatly surprised, recently, when he saw the big Morgan company building, which had been completed inside of three months, now filled with a small army of workmen turning out five and ten ton motor trucks, which burn oil as fuel, thus doing away with the cinders and smoke which were so offensive in the old steam trucks. The steel tires used on the Morgan trucks are six inches for the five ton, and twelve inches for the ten ton vehicles. It is perfectly obvious that these tires are great aids to the production and maintenance of good roads, since they crush all small rock and roll the rough places smooth.



You've all heard a lot about how very superior the foreign wooden artillery patented automobile wheels are. Incidentally it is possible you have gathered the idea that maybe the American type of metal wheel is not quite as good as the foreign wooden one. If you have such ideas, get rid of them. The greatest test of an automobile the world has ever seen was the recent race from Paris to Vienna, wherein an average speed of 51 miles per hour was maintained for the entire distance across three countries and over the mountains at an altitude above the snow line. The winner of this race was a Renault car, equipped with wire wheels. An accident, say you? Well, then, how do you explain that notwithstanding the relatively small number of wire-wheeled vehicles in the race that not only the first, but the fourth, the sixth and the seventh vehicles at the finish had wire wheels? As Mr. F. G. Mott, Jr., who knows a thing or two about metal wheels, remarked in commenting on this victory of the American idea of wheel over the foreign idea of one: "Most of the vehicles in this race were driven by their designers or their makers. These men certainly had ample experience and opportunity to judge of the merits of wire and of wood wheels, and certainly they were not inclined to risk either their lives or their reputations. These people all used wood wheels formerly, yet in this instance they used wire

ones. Any significance in that?" Certainly seems as though there was something in these facts, doesn't it?

One of those light-weighted, sharp-featured youngsters whose good fortune it is to be able to ride a running horse better than other youngsters, and who in consequence consents to accept a salary for doing so which would make even a bank president envious, came out of the Waldorf on a recent evening and took his seat in a big French touring car, for the purchase of which he had probably parted with no small number of the thousands of dollars he so easily earns. The big vehicle started right enough, but before a dozen feet had been traveled, it snorted, buck-jumped once or twice, then stopped short, and shook itself violently and noisily. The miniature owner bit savagely at the big cigar he was smoking, pulled this lever and that, looked here and there, but all to no avail. The big vehicle declined to proceed. The chauffeur jumped out, barely touched some portion of the refractory motor, and forthwith the big one was off with a snort. The jockey-owner had his horse sense and his horse-guiding skill with him, and to them alone was he indebted to just missing a passing hansom. Then the vehicle stopped again and the churning motor made a melody such as even no lover of an automobile cared much about hearing. Among the onlookers, most of whom knew the vehicle's owner, was a newsboy who promptly proclaimed his acquaintance by exclaiming:

"Give her de whip, sport, or yer'll never pull out o' de bunch! Git a move on yer or dey'll all run over yer, sure!"

The young owner never appeared to be aware of this or the other remarks which greeted him in his embarrassing position. Looking straight ahead, he bit yet harder on the big cigar and waited for the alert chauffeur to once more straighten things out. When this was done and the big vehicle was once more on its good behavior and away, the gamin, notwithstanding his former failure, could not resist shouting after the disappearing jockey-owner:

"Now yer got 'em, sport. Git up on her back an' ride her out, den maybe yer'll finish in de money!"

But even the silver initials on the rear of the fast vanishing automobile were now scarcely readable, so maybe the jockey-owner never heard this last bit of gamin sarcasm. At any rate he never gave any sign that he did.

I am told the figure for French chauffeurs is near forty dollars a week at the automobile stations—a tremendous advance over Paris wages—and some of the French fraternity are giving French waiters a few elementary lessons in chauffeurism and are dividing the spoils of American ignorance and absurdity. I predict that the French chauffeur will enjoy only a few more short months in his American clover field, and he may well sip the honey therefrom while yet he may.

The rasping "Going, going. For the third and last time, are you all done?—gone!" is now being heard in connection with the alleged sales of alleged automobiles. The "going" refers to the sale of the vehicle, not to any allegement that it either has gone, will, or can go. The "gone" is a tender allusion to the cash of any one foolish enough to have parted with it in return for the vehicle. In plainer language, the auctioneer thinks he has found in the public's anxiety to purchase automobiles an opportunity for his peculiar talents. Perhaps he is correct in this idea, then again, perhaps he's not. Wisdom would say to all intending owners of automobiles that the auction mart is hardly the place to purchase either a cheap or a reliable vehicle. In such matters it is best to part with your money only in exchange for a vehicle, the seller of which you will know where to find and when, should you after purchasing it discover that what you thought you were buying and what you bought were not exactly one and the same thing. Auctioneers are good things in their places, but just at present it does not seem that they are absolutely necessary as a medium between the buyers and the sellers of automobiles. THE SENATOR.

Automobiling At Sea

ANGUS SINCLAIR

ON the sea is not an ideal place for automobiling, but I find that there is considerable mouth motoring done there the same as great feats are achieved by the same appliance in clubs and other places where automobilists meet and find listeners to their tales of wonderful feats performed mostly by the imagination of the narrators.

There is a resort in every ocean liner called the smoking room, where fragments of knowledge are thrown about quite recklessly, in a way that I have often heard statements about railroad matters distributed in the rooms where brakemen and other train men assemble. A talkative brakeman can generally give listeners more information about the railroad he is employed upon, than the president and general manager; and the habitues of the steamer smoking room, assume to know more about the management of the ship than the captain, and are prepared to give pointers to the chief engineer about the care of engines and boilers.

It was in this resort of indiscriminate wisdom that I happened to overhear on the second day out a discussion about automobiles, which was very amusing if not edifying. Two young men, of the vealy age, were the leaders in telling what they had done in running automobiles. They were of the class that is indebted to their fathers for the means to purchase automobiles, but that did not inspire any modesty, and it seemed to convince the auditors that the vealy youths must be good authority on the sport they had made their hobby. Their pride was in the speed they had made, and if half their tales were true, both of them ought to be in prison. They talked as if the roads belonged to the people who own automobiles, and that other users of roads have no rights which automobilists ought to respect. They discussed the best plan to follow with skittish horses, and both agreed that the easiest way for the automobilist was to keep up speed and let the drivers of horses look out for themselves.

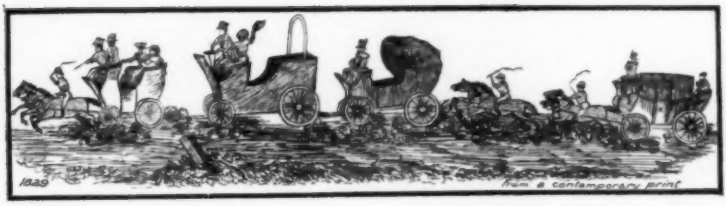
Here is the class of men who are raising a sentiment in the United States against all automobilists. Those who are interested in the development of the automobile industry, and in making the automobile a popular means of pleasure, utility and sport, ought to do their best to suppress the reckless, irresponsible class which I have been writing about.

Some of the worst trangressors are members of automobile clubs which nearly all have rules under which members with dangerous tendencies could be disciplined. I am not aware that adequate punishment has yet been inflicted by any club to a single transgressor of its rules, even under crying provocation.

Automobile clubs or the law ought to exercise some supervision over those who run high speed automobiles. There is a prevailing belief, that as soon as a man learns how to manipulate and steer an automobile, he is a competent motorist. That is by no means true.

An intelligent man who knew nothing whatever of mechanism might be put on the locomotive pulling the Empire State Express and in four or five weeks he would learn to handle and run the engine as efficiently as an old engineer when everything went right. But in case of an impending accident he would be dangerous and useless to grasp and control an emergency.

It would take four or five years of experience to train the man to act before he had time to think, when a sudden necessity for prompt action arose. It is the lack of that kind of training which makes the inexperienced automobilist weak, and which has led to so many serious accidents.



An Adam of Automobiling

SAMUEL E. MOFFETT

IT was Fair Day at Melksham. The streets of the little English town buzzed with country people bargaining for cheap finery at the peddlers' booths or staring at the Punch and Judy shows on the corners. Suddenly a hum of astonishment, swelling into rage, rose on the outskirts of the crowd. and as it grew in volume and fierceness, Punch found himself perpetrating his direful deeds without an audience.

With open mouths the crowd stared at an apparition advancing slowly down the main street. First came a carriage and a pair, the horses panting in a white lather of foam, a postboy sitting limply on the back of one of them, a grimy mechanic on the box with the driver, and a couple of spruce gentlemen inside. Next, an astonishing puffing monstrosity—a thing on four wheels, with fire glowing beneath, a mist of steam rising behind and a couple of engines wheezing between the wheels. Two men were riding on the box, but instead of reins, one of them was gripping a horizontal wheel with which he seemed to be guiding the devilish contrivance. There were no horses—like the Chinaman's cable car in San Francisco fifty years later, it was a case of "no pushee, no pullee, go like hellee."

Not only were there no horses to pull the infernal machine, but it itself was drawing an open barouche in which some men sat with an insolent nonchalance most exasperating to a free-born Briton. Behind this outrageous contraption came another carriage with four lathery horses and two wilting postboys. Eight gentlemen of leisure and as many engineers and mechanics were distributed among the various vehicles. So, to the amazed and

indignant inhabitants of Melksham, appeared on July 30, 1829, the steam automobile of Mr. Goldsworthy Gurney on the first long journey ever performed by a locomotive at a sustained speed, either on road or rail.

Mr. Gurney had been scorching between London and Bath at the appalling rate of ten miles an hour or more, but on approaching Melksham, he had slowed down to a walking pace to avoid exasperating the crowds at the fair. But the popular wrath at his ungodly innovation was not to be so easily disarmed. The hum of anger swelled to a roar. "'I Bill!" shouted one conservative citizen, "Wot is it?" "Give it hup," Bill responded, "but 'eave 'arf a brick at it anyway for luck."

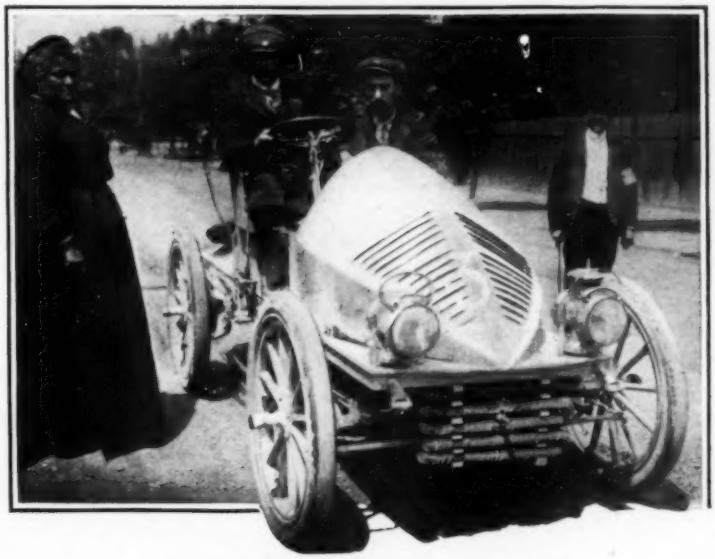
No further invitation was necessary. The air was speckled with flying "remnants of a paleozoic age." An engineer had his scalp laid open with stones and flints. The stoker had the same experience, and in addition was knocked off his seat into the road. Thereupon the rest of the sixteen mechanics and passengers formed in line of battle, and after desperate deeds of daring, succeeded in securing the caravan in the yard of a friendly brewer, where it was guarded by constables during the night. The steam carriage was taken to Bath the next day under the escort of the officers, and on the return trip it was smuggled through Melksham at midnight, drawn by horses.

Such were some of the diversities of life among the pioneers of automobiling. Most of us do not appreciate how much energy, ingenuity and courage were devoted to the development of mechanical carriages more than seventy years ago. When Gurney made the trip that so stirred the wrath of the conservatives of Melksham, England seemed at the beginning of an automobile age.

The system appeared more promising then than it did as recently as ten years ago. Gurney's carriage was a wonder for its time. It was intended to be used exclusively as a motor, drawing behind it another carriage for passengers. As first designed it was steered with a lever, like the light automobiles of to-day, but in its improved form it had a horizontal wheel, such as is used on the modern big machines. It had a pair of high pressure engines whose use was made practicable by several ingenious inventions of Gurney's, which have proved of fundamental importance in all subsequent engineering practice. There was a tubular boiler instead of the old kettle, and the famous Gurney steam jet, whose subse-

quent adoption by Stephenson, doubled the speed of the Rocket and made that pioneer rail locomotive a practical success.

The Gurney carriage was driven by cranks attached to the axle of the hind wheels, and it was so arranged that power could be given to one hind wheel or both. It was about ten feet long and



A 13 h p. Ader in Paris to Vienna Race

carried two men, most of its space being required for machinery, coke and water. It had the disadvantage of having to stop often for supplies. Every half hour its thirsty boiler called for more water, and every hour its hungry firebox insistently demanded coke. These things had to be found somewhere, or the machine would sit back and balk, and a balking automobile, then as now, could give lessons in firmness to a Georgia mule.

On the trip in question an extra supply of coke was taken along in one of the horse drawn carriages, but even at that time the idea of making a steam vehicle depend upon one drawn by horses to keep it going, was considered open to criticism. The difficulty was obviated later by having fuel stations at regular intervals along the road. On the journey between London and Bath, Mr. Gurney would stop whenever he saw water and fill up his

tanks, not knowing when he would have another chance. It made the machine puff with justifiable pride to rest in dignified ease while eight mechanics and eight gentlemen in tall hats and long frock coats ranged themselves in line and passed buckets from a pond on the other side of a hedge.

This journey was undertaken under the auspices of the quartermaster-general of the army, who wished to test the value of the steam carriage for military purposes, and the army authorities considered the experiment supremely successful. All the arguments against the new device were disproved at the outset. A complication with a mail coach and a pile of bricks broke part of the machinery, and almost the entire journey was made with the power of only one wheel. At the first stage of the trip, the motored vehicle met and passed twenty-one carts, seven wagons, two post-chaises, four mail coaches, seven stage coaches, one two horse dray, three gigs and six horses, and the report triumphantly asserts that not a single horse started or was at all disturbed except in the preliminary mixup. An average speed of ten miles an hour was maintained with ease, and in spurts the machine went at the rate of between twenty and thirty miles an hour.

Coke was sometimes not obtainable, and it was necessary to use coal. In such circumstances, as even Lieutenant-Colonel Sir C. W. Dance, the enthusiastic inspector and subsequent patron of Gurney, admitted, the steam carriage might be a nuisance. It poured out clouds of smoke, and in the dark "some sparks flew up the chimney which made the appearance of a beautiful firework. This would be highly objectionable and dangerous to thatches or haystacks, but it can never happen with coke."

It is noteworthy that Gurney, whose fertility of mind made him an Edison of his time, regarded the clumsy fuel he was compelled to use, and even the whole system of steam propulsion, as a passing makeshift. He distinctly foresaw the improved motors of to-day. In his testimony before a Parliamentary committee in 1831, he was asked: "Do you apprehend much decrease in the price of your engines?" (They were then costing $2,500 apiece.) He responded:

"I do, and I also anticipate that steam will be supplemented by the use of other elementary power; but I do not think that will take place in our day. I think that steam will be generally introduced, and that the public will feel the importance of it; and that scientific men will be directed to examine and employ in its stead other substances, and new compounds are continually turning up,

and some will eventually be applied to mechanical purposes. . . . I do not specify any particular compound at this moment; I state those generally which are known to produce power by chemical change; some peculiarly explosive and aeriform bodies, for instance."

On this memorable trip in July, 1829, the Gurney steam carriage covered the two hundred miles from London to Bath and return with complete success. It ran up the steepest hills with ease,

Mme. Lockert on Alpine Tour

drawing another carriage behind it, at from seven to ten miles an hour, and it covered eighty-two miles in eleven hours, including all stops.

What that meant may be realized when we remember that in the first modern automobile contest in America in November, 1895, sixty-six years later, it took the winner ten hours and twenty-three minutes to go the fifty-four miles from Chicago to Evanston and return. Gurney's success was so impressive that within two years, from twenty to forty different motor carriages were under construction by different persons, some of them built, as the inventor testified before the Parliamentary committee, by men "who previously had laughed at the idea and considered it chimerical."

Gurney seems to have anticipated every possible objection. He was asked, for one thing, what would happen if the guide or director fell asleep, or dropped off his seat, or met with some other accident. "I have provided for all these casualties," he replied, "by making the valves of the engine only remain in gear while the guide in in his proper situation. The moment he is thrown off his seat by accident or otherwise, the engine instantly stops."

He explained that the engineer's foot held the valves down, so that simple neglect to attend to his business would stop the machine. The same contrivance enabled the driver by merely lifting his foot to prevent the carriage from running too fast down hill.

In 1831, Sir Charles Dance ran the Gurney carriage between Gloucester and Cheltenham uninterruptedly for three months as a business arrangement without a single accident. It covered the distance of nine miles regularly in fifty-five minutes and often in forty-five. Other inventors were working along similar lines, and some of their carriages were also accomplishing profitable commercial work. The sun of the "Automobile Age" seemed rising in a clear sky, when it was suddenly eclipsed by that stubborn prejudice of which the conduct of the Melksham mob had given a foretaste.

Turnpike companies discriminated against motor carriages on their roads, and when the matter came before Parliament, that body, notwithstanding a warmly favorable report from a select committee of the House of Commons which had fully investigated the subject, passed laws, which by means of excessive tolls and absurd regulations made it impossible for a self-propelled vehicle to be successfully operated on an English highway.

The British lead in automobile construction was abandoned, to be taken up sixty years later by the inventors of France. Gurney, suppressed by the laws that ought to have encouraged him, abandoned the subject of motor vehicles in disgust. Long before, he had invented the oxyhydrogen blowpipe and the Drummond light, had anticipated the idea of the electric telegraph, and had made suggestions concerning heat, electricity and gases which secured an acknowledgment of indebtedness from Faraday. Now he took his steam jet which he was not allowed to use on the highways and employed it to put out fires in coal mines, one of which had been burning for thirty years. He ventilated sewers with it. He invented the Gurney stove. He ventilated and lighted the Houses of Parliament on new principles. He devised a flashlight system

for lighthouses. He was knighted in 1863 for his services to science and died in 1875 full of years and honors, but still debarred by the laws of his country from developing the great invention which he had carried so far a half century before. In 1829, grave fears were expressed that the horse might be driven from the highways, to the ruin of British agriculture.

When Sir Goldsworthy Gurney died in 1875, the horse sur-

In the Arlberg Pass, Paris-Vienna Race

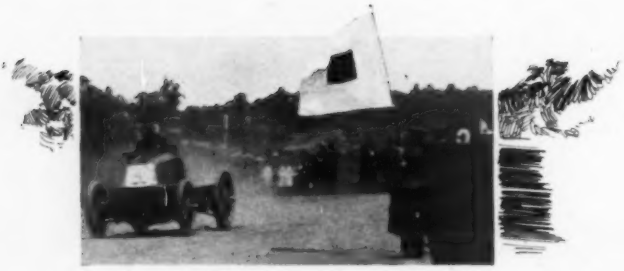
vived him, but he might not have done so if there had been a fair field and no favor. In 1875, the horseless carriage was practically no further advanced than in 1829. But if the inventors of the earlier age had been allowed to go on, there might have been a race of English Fourniers sixty years ago, and the whole history of the world's transportation system might have been written differently.

While the Rush Is On

"Ah! there she goes in her coach and four."

"Yes; she's not in the least ostentatious. She can well afford to ride in an automobile, but she prefers not to parade her wealth."

To be sure, there was the bulge in oats; but, on the other hand, there were repairs.



The Plaint of the Hobby Horse

My springs are rusty, a coat of dust
  Obscures my saddle; my coat and mane
Lack grooming sadly, and I've been thrust
  In this old attic, where I'll remain,
Perhaps, forever. My equine pride
  Is crushed in knowing my master feels,
Instead of me, he would rather ride
  A thing composed of a lot of wheels.

It's plain, my rider has quite forgot
  The faithful charger who bravely tore
Through hurtling torrents of shell and shot
  Each afternoon that he went to war.
Can he remember the morning when
  I jumped the seventy-foot ravine
And saved his life from the yellow men?—
  Suppose he'd been on his wheel machine!

When riding over the lonely plains,
  As cowboys are daily wont to do,
He often gathered my loosened reins
  To speed my race from the savage Sioux.
In times when he was a noble knight,
  I won each glorious tournament;
When highway-robbing, my splendid flight
  Another horse in a mile had spent.

Yet I'm deserted and left to lie
  In dust and darkness—alone, alone!
While his affections are conquered by
  A poor, unreasoning, blind machine.
Ah! luckless fate! that I hadn't died
  Before this day when my master feels,
Instead of me, he would rather ride
  One of those noisy automobiles!

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A Live Journal for all interested in Motor Vehicles

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Man and Machinery

MAN shows his superiority to the animals by digging potatoes with a hoe. The hog roots them up with plenty of speed for his present uses, but the speed is limited, while with machinery the limit of speed of man has practically never been found.

Machinery is the saving of man. His spiritual and his moral salvation as well as his intellectual is being worked out by the spread, the domination, the complete entrance of machinery into every phase of his life; by the absorption by machinery of that drudgery which hitherto has inexorably held a certain portion of the human race subservient, a portion which would grow even larger and larger but for the saving power of machinery.

Theosophy, which believes in the ultimate elevation of every soul, must regard the growth of machinery as the most hopeful sign that has yet been vouchsafed it of the uplifting of the mass of souls out of the lower state they have been in for so many centuries.

There are two theories about the inhabitants of Mars—if there be such. One is that they are divided into two distinct classes—the ruling, intellectual, leisure class and the subservient, drudging class, hardly higher than our domestic animals. The other theory is that machinery has there been so far perfected that the minimum of labor with the maximum of intelligence suffices for sustenance. The choice between these two confronts the world.

Nature has tried her little sociological experiments as well as man; the squirrel, with its store of nuts, learned to provide for the future in one way; the bear, with his fall fat and hibernating habits, in another; the reindeer, pawing through the snow to the succulent moss, in another; the camel, with his seven water-preserving stomachs, in another.

But man so soon saw the immense resources of machinery that he deserted all the animals' methods for those that opened before him when the first savage pried up a rock with the branch of a tree and discovered the use of a lever.

In our present civilization the distinctions that men have made for themselves differentiate men more, almost, than they are differentiated from the animals.

"Some one must do the drudgery" is a phrase often used; but every time that a machine takes any of the heavy labor off the shoulders of man it rids the labor market of the demand for a lower type of man and calls for a higher; it adds a few to the "submerged tenth" who are a cumbrance to the earth and must disappear, and furnishes a livelihood to others better provided mentally and morally.

It all seems very cruel and heartless, and to the individual that suffers it is. But to the race at large it is not. It, more than the public schools—or rather, hand in hand with the public schools—is taking mankind to a higher and ever higher level of life.

The man that drives an automobile at twenty-five miles an hour has to be quicker, more alert, than the man that used to drive a truck at five; the man that runs a threshing machine, than he that threshed out grain with a flail.

Machinery is taking off man's hands the work that requires the least amount of brains; that can best be performed by some form of motor. It is not making man's labor less severe, rather the contrary; it is continually adding to his responsibilities, to the necessity of using his head with his hands. In itself his work is often harder than it was; yet, inasmuch as it requires a higher applica-

tion, it gives man such a sense of his own powers that he would never go back to the old easier methods.

Every mile added to the speed-producing capacity of a motor compels and marks a corresponding gain in man, not only in the maker of the motor, but in the operator and in the owner of it.

The members of the submerged tenth are the cart horses of the human race, only, like their equine prototype, unfortunately, they cannot be sent to the bone yard when their value to society has ceased, but stay on to hamper and perplex the victorious nine-tenths—perhaps also to soften their sensibilities and to remind them of the failures in the triumphal march of humanity.

Popular education, which sometimes seems so far from a success, is one of the necessary concomitants of this salvation by machinery. As year by year steel is produced with greater strength and fineness, so year by year man has to develop a little higher quality of mind, that he may not be left behind in this mad race between himself and his own machinery.

In all this exists the cause for the appearance of the automobile and the certainty of its final triumph over prejudice, ignorance and non-progressiveness.

Teaching Horse Sense

THE proper cultivation of horse sense is more difficult in some men than in the animals the same men drive. This is not complimentary to the biped, nor is it intended for a compliment of the quadruped. Facts are not based on compliments, though sometimes compliments are based on facts; the foregoing horse sense declaration is a statement of a fact without regard to whom it may either compliment or annoy.

When the horse is brought in contact with something he does not understand, and by his master is forced to approach the strange object, it is but natural that the dumb brute, through the mere instinct of self-preservation, should protest against a closer acquaintance with what to his uneducated brain seems to be an enemy. That is horse sense, and it is good sense, too.

When a man whose superior brain has enabled him to satisfy himself that a thing heretofore unknown to him will not injure him, he thereupon approaches it without fear, that, too, is horse sense. But when a man ignorant alike of the need for self and for his animal's education, by punishment and profanity forces the

poor, trembling brute to approach a strange and terrifying object, that isn't horse sense; it is sheer idiocy.

The automobile has been an abused user of the public highways quite long enough to have very conclusively demonstrated that idiocy of the horse driving variety is an extremely virulent, widespread and incurable complaint. Time is wasted in any endeavor to cure or even improve the mental condition of a motorphobe, hence the endeavor which is now to be made to educate the more intelligent of the two animals, that is to say, the driven, not the driver.

Few horses there are who cannot be "broken" to the automobile. It is not the speed, the noise, the odor, or the appearance of the new conveyance which frightens horses; it is that the combination of them all is new to the animal and not understood by him. He has grown acquainted with the railway, the trolley and the elevated, each of which has even in a greater degree the very elements which in an automobile so terrify him.

Education is then the cure for automobilitis just as it is for many another fancied illness, and the Automobile Club in proposing an academy where horses can be taught that the automobile is as harmless a user of the highways as themselves, is doing a most excellent bit of proselyting. Horse sense of the animal kind is not a variable or a questionable quantity. With the animal you can be certain that you can teach him that an automobile is harmless so far as he is concerned, and the Automobile Club is acting for the best interests of all concerned in undertaking his education.

It is unfortunate that malignant motorphobia is incurable, because even after you have educated the horse to a full realization of the harmlessness of the motor vehicle, you can never tell what the poor animal will be driven to do by the antics of his less intelligent biped, who by one of those contrarieties of nature, is placed in control of one wiser than himself.

What the Poet Said

WHEN Ruskin was brought face to face with the bicycle craze he retired to his library and relieved himself of this opinion:

"I not only object, but am quite prepared to spend all my best 'bad language' in reprobation of bi-, tri- and 4-, 5-, 6- or 7-cycles and every other contrivance and invention for superseding human feet on God's ground. To walk, to run, to leap and to dance are the virtues of the human body; and neither to stride on stilts,

wriggle on wheels nor dangle on ropes, and nothing in the training of the human mind with the body will ever supersede the appointed God's way of slow walking and hard working."

Just what Mr. Ruskin might have written after he had encountered a 60 horse power racing car driven at top speed by a crack brained scorcher, would, in view of his foregoing opinions of bicycles, have proven most interesting reading.

While the appearance of the automobile has been of great advantage to the native joke making industry, its increased use will not be altogether for the profit of those whose chosen occupation in life it is to rough hew humor from surrounding circumstances and conditions. For lo! these many years the sad souled commuter, the borrower, the lender and the motive-power of the rattling, rusty lawn-mower, has been a standard and a never-failing article for jokesmithing. To-day a little motor, a pint of gasolene and a comfortably cushioned seat makes the lawn covering operation of a mower a thing which children cry for and their parents sigh for. However pleasant all this may be for children and their parents, it cannot be equally so for the funsmith, who sees in this new invasion of motorology a direct attack upon his very limited stock of material.

Among the many other new conditions brought about by the coming of the automobile, none is more insistent and none more evaded than the needed revision of insurance policies. As it is now the owner of an automobile has his choice between being robbed by the few companies who grudgingly grant him partial protection for his property at exorbitant prices, or of carrying the risk himself, which, as a prudent man, he does not care to do. Perhaps when the saffronic press has found something new to belabor the automobile will be considered even by the insurance people as something worthy of fair and businesslike treatment. Until the arrival of such a happy time, however, the owner of an automobile finds himself so far as insurance goes, uncomfortably placed between the devil and the deep, deep sea.

Whether it be close to godliness or not, certain it is that cleanliness in connection with an automobile is virtually a necessity, if the owner of the vehicle would have either safety or comfort out of his automobiling. No mechanism as much subjected to the strain and dust as that which is employed to drive a road carriage should ever

be allowed to remain unattended for any length of time. To permit the motor, the bearings, transmission and the like to become caked with mud and dust is to rob them of a large amount of their efficiency, and to most certainly injure them to an extent which will call for their speedy replacement. The man who will neither care for it himself or hire some one else to do so for him should not own an automobile.

There are not wanting signs that the severe attack of motorphobia from which a large section of the metropolitan press, as well as the rural Dogberrys have been suffering is rapidly approaching a crisis. The whole affair has reached a semi-hysterical stage which always presages the near approach of the end of such attacks. The American people are particularly prone to severe, but very limited, lapses from their normal condition wherein they are usually possessors of common sense in an unusual degree; the lapse in the case of the automobile has been not only more pronounced but more prolonged than usual, and the reaction will be correspondingly rapid when it occurs in the very near future.

We do not believe that the automobile was ever intended for a racing machine. Trials of its speed and endurance over long stretches of road, such as the one from Paris to Vienna for example, do much to convince the public as to the reliability of the motor vehicle, and are in consequence advantageous in every way, but as a purely catch-penny, money making, around a track and a betting proposition, we are pleased to say we do not believe the automobile will ever be a success. Racing and its accompanying bookmaking are the two things all those who really have the best interests of the automobile at heart are perfectly content to leave the supremity of the horse unchallenged.

The famous owner of the White Elephant and the victorious winner of the Bennett cup can sympathize with each other. Mr. Edge finds himself the holder of a trophy which, under the conditions he won it, calls for its being raced for on British territory. But racing law and British law are two very different things, and so, while Mr. Edge would be only too glad to defend his title to the cup in his native land he can not at present see his way clear to do so owing to British dislike of the automobile. Meanwhile the Frenchman is privileged to laugh when he sees this unusual example of British narrow-mindedness where sport is concerned.

According to the registration lists on file at the Secretary of State's office in Albany there are 1,600 automobiles in this State. Making due allowance for that peculiar streak of forgetfulness which always overtakes a man when he is called upon to report his belongings for taxation, it is not an exaggerated estimate to put the number of motor vehicles actually owned in New York State at 2,500; at an average cost of $1,000 each the quite respectable sum of $2,500,000 is found to be invested by New Yorkers in what unthinking critics have quite often seen fit to declare was only "a passing fancy."

Is the automobile equal to the great opportunity which is its? A bell is judged by the degree of its resonance—by the completeness of its response to the blow of its iron tongue. And inventions are fairly measured by their human quality of resonance—by the promptness and greatness with which they respond, each in its place and hour, to the hammer-stroke of great emergency and great opportunity. So tested and so measured in view of the record thus far completed, the Automobile stands in the eye of the world to-day. The future must be judged by the past.

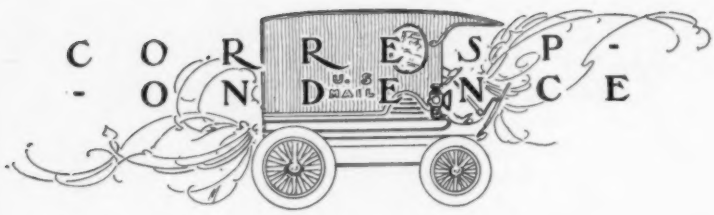
To many the exact meaning of the word "tonneau" is not known. The word is French, of course, and means literally a cask. When applied to the now favorite type of vehicle body the appropriateness of the word is obvious, since the rounded corners of the body look like nothing so much as they do sections of a cask.

Good roads in a lawless country soon end the lawlessness. Our army in the Philippines is putting this maxim to the practical test. The American trolley car along with the automobile, will soon complete the process.

Experience is the best school to teach the man who knows it all about a vehicle that the more he knows the more he has yet to learn.

No young man is excused from carrying a lamp upon his automobile merely because the light of his life may be on the seat beside him.

It is harder for an arrested scorcher to call up sympathy than it is for an automobile to pass through the eye of a camel.



Looking for a Hill Climber

DO you think that it is asking too much of an automobile to surmount a sand hill with a ten per cent. grade? I have tried a low-powered, light runabout and found that it could not be depended upon to do this at all times; now I want to get a vehicle that can and will do so. I do not care what the power is nor what the style of the carriage is so that it will do the work. I would not even object to taking a second hand vehicle, if by doing so I could be sure of getting immediate delivery, and something which had been tried and not found wanting. The great difficulty with the automobile, so far as I have gone, is that as they increase its power they increase its weight to an extent which seems to make the increase of little improvement when it comes to surmounting a hill. Any advice you or your readers can give will be appreciated, as you will note that I am just a bit out of the beaten tracks for automobiles.

FRANK H. YOUNG.

Broken Bow, Neb.

Prices Will Go Higher

DIFFERENT newspapers have been exploiting the wonderful achievements of Mr. Thomas A. Edison, by which it is claimed that in the near future the cost of an automobile will reach the ridiculous sum of $150. As these statements are read generally by the public who believe them, I wish to state, as a manufacturer, that such statements and their publication are doing much damage to the automobile industry in general. All manufacturers of electrically propelled automobiles are, and have been, looking forward to the possibilities of the Edison batteries, which they hope will give greater mileage and durability while at the same time permitting of their being more rapidly charged than the

batteries in general use at present. Should this success be obtained by Mr. Edison, it is not expected by manufacturers that this improvement will reduce the price of an automobile, but to the contrary, it will probably increase the price thereof.

The electrically propelled vehicle of to-day is a practical success, as we who make them can easily demonstrate. Such a carriage can be run with more safety and greater economy than any other vehicle. The present cost of manufacturing a first-class electrically propelled runabout is in the neighborhood of $900, and, if properly built, it can not be produced for a sum very much less than the one named.

The cause of the most failures in the automobile business has been the inability of the manufacturers to sell their vehicles, which in many cases are only crude experiments, at a price which would give them even a small margin of profit. The result has been that they have been compelled to dispose of their poor productions below cost of even their production. Such a condition as this certainly cannot last, and I therefore predict that in the near future the price of good automobiles of any make will be considerably higher than it now is.

At present many people not knowing the difference between a good motor vehicle and a poor one buy the cheapest then can find, and only after purchasing do they sadly realize the mistake they have made in the matter. I should like to have you publish this letter, since doing so will help enlighten the public on this most important subject, thereby aiding in the restoration of public confidence in automobiles of honest manufacture for which fair prices are asked.

New York. A. L. SIMPSON.

The Inns of Pennsylvania

YOUR article in the June issue on Roadside Inns, strikes a responsive chord in the heart of every true automobilist. Since coming into this part of the country, I have frequently noticed and enjoyed the accommodations furnished by what I term "the smaller inns."

These places evidently derive a considerable part of their revenue from the liquid refreshments which they serve, but the large German element demand this and generally do not abuse it, so that these places are usually orderly and well kept. The portliness of this class of people has been frequently remarked and is often attributed to the liberal use of beer. but I am inclined to believe

that the first-class quality and liberal supply of the clean, wholesome food found on their tables, is rather the cause, and that to the clean, hardworking, well-trained housewives should be given the credit rather than to the brewer.

In my experience a small inn offers a touring party practically the advantages of home, in that the place is quiet, secluded, people friendly and willing to oblige, while the service, although lacking many conveniences that modern city folks are accustomed to, is interesting because of its simplicity. The rooms and beds are scrupulously clean, the meals liberal in quantity, well cooked, cleanly prepared and first-class in quality. The surroundings frequently have much that is inviting, such as well-kept gardens and flower beds, with birds, squirrels and similar pets, not to mention chickens and larger live stock in good condition.

The absolute quiet during the night at these places makes a change from city life both pleasant and refreshing, while the cost for such accommodation hereabouts is ordinarily 25 cents per meal or bed, and doubtless weekly rates, if one chose to locate at one place for some time, would be less, making touring in this part of the world cheaper than staying at home.

Reading, Pa. CHARLES E. DURYEA.

Look Out for Sharks

THE public and prospective buyers of automobiles should be warned against the numerous sharks that are trying to break into the automobile business. These are the same gentry whose undesired presence proved a serious detriment to the bicycle business. "Auction sales," "second-hand vehicles," "commission business," "consignments solicited," are some of the signs employed by the fakirs.

An advertisement in a Sunday paper of one of the above places located down town, resulted in the place being visited by the writer, and instead of finding what was advertised, I found one old steam carriage, upon which an inexperienced repairer was working. This particular place, so its proprietor says, is to have an auction sale (of all makes) and invites consignments. My advice is, keep your automobile unless you can turn it over to those who you know to be responsible people. A. J. D.

Brooklyn.

(The AUTOMOBILE MAGAZINE has refused advertisements from

several questionable concerns of the above kind, and it will continue to do so. The warning of our correspondent is timely and should be heeded.—Editor.)

British Columbia's Horse Sense

THE defense of the automobile and the automobilists in the New York daily papers by your editor was most timely and seems to have stopped the flood gates of abuse, at least temporarily. Do you not find that most of the runaway horses (said to have been scared by automobiles) were in charge of scared drivers, unfit to drive a sheep? We here in British Columbia are endeavoring to get horses accustomed to the automobile. Some of us make use of every opportunity to talk to drivers and to assure them that the trolley car, the bicycle, and other public conveyances were far worse scarers of the horse when they first appeared. A scared horse which cannot be made familiar with all other users of the highway has no business on the public road anyway, and when joined to an easily frightened driver the combination is unpardonable.

Victoria, B. C. J. W. DAVIS.

Self Propelling Invalid Chair

Is there anywhere an engine, either electric, explosive or steam that can be attached to an invalid's wheeled chair, so as to propel the chair and its occupant who weighs 145 pounds? If you or any of your readers know of any such a thing it would be conferring a great favor upon one who is in need thereof and prepared to pay any reasonable price for a motor which will do the work above outlined. JAMES BUSSEY.

Bastrop, La.

The above is not the first inquiry which has been made to us for a motor propelled invalid's chair. We believe that there exists quite a demand for something of the kind, a demand quite large enough in fact for a manufacturer to devote his entire time to supplying.—ED.

Wants to Be a Chauffeur

It seems to me that a chauffeur must be a man who not only knows how to run the motor vehicle which he is in charge of, but he must also be a resourceful man who can meet unusual conditions and overcome them. After devoting twelve years to the operating, constructing and repairing of more or less delicate and

complicated machinery the position of chauffeur seems an extremely easy one by comparison. Is there any way which you can suggest by which I can secure such a position? I am sure I can demonstrate my ability if I am only given a chance to do so.

Grand Ledge, Mich. A. M. MORLEY.

Popularity of Steam

Is it not a fact that there is a decided increase in the number of steam vehicles in use? I hear of new sales daily to people who were formerly afraid of steamers, chiefly because of the necessarily experimental construction of the early carriages and the consequent heavy repair bills. A good steam vehicle, to my mind, is a little better than anything else, and I believe that the steamer will outlast the gasoline type of vehicle.

Denver, Col. FRANCIS V. PETERMAN.

Still a Necessity

"Hooray!" exclaimed the optimistic equine, "the motor vehicle won't be able to take our places altogether."

"What have you heard?" inquired the sorrel in the adjoining stall.

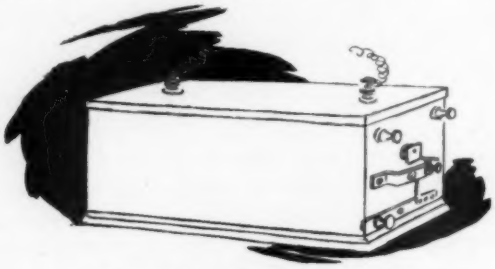
"Why, it says in this paper that the finest automobiles are upholstered in horsehide."

A Familiar Item

He (reading the paper)—There it is at last! I've been looking for that statement for a long time.

She—What is it?

He—It says that the Chinese used motor vehicles several hundred years before the Christian Era.



A Shocking Automobile Affair

Taken Unawares

AUTOMOBILISTS are very retiring. It is extremely difficult to induce them to have their pictures taken. For example, see how unconscious of the presence of the photographer each and every one of these gentlemen was when the photog-

rapher, taking advantage of their unconsciousness, pressed the button which resulted in this picture being taken and printed here, much to the annoyance, no doubt, of the gentlemen whose likenesses are thus made public.

When Cupid Scorches

A summer's day,
A cup, a tray,
A pretty maiden pouring,
Two happy hearts all full of darts,
The love god blithely soaring.

The organ peals,
The preacher spiels
The part he's paid for playing;
A "lodge," an auto, some flirting—what
Is this the world is saying?

A charge, a plea,
And they are free—
Behold them fast retreating!
A flight of darts, four living hearts
As two begin their beating.

Proverbs

Ride and let ride.
It is never too late to learn.
The beaten path is the safest.
Caution is the parent of safety.
Put a strong motor to a steep hill.
A stop in time may save a fine.
Where there's a wheel there's a way.
A good driver turns in a small space.
A little oil may save a deal of friction.

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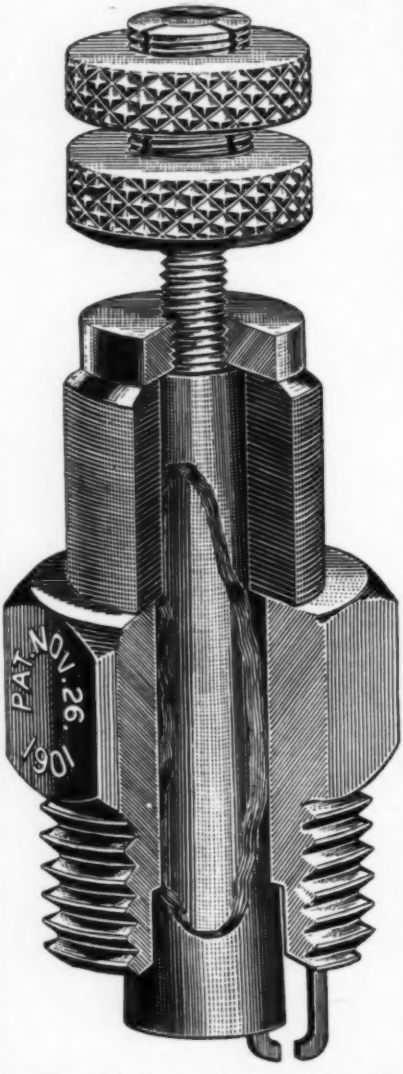

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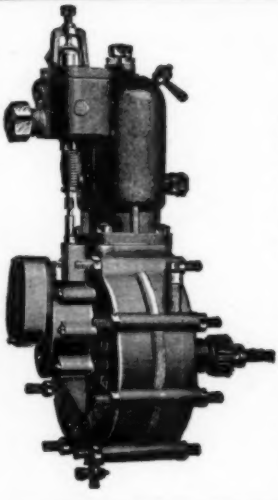

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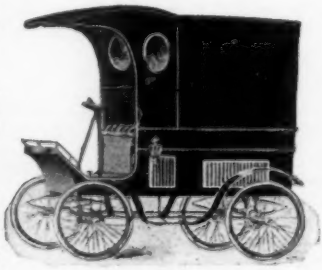

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